Economic perspective on the political history of the Second Bank of the United States

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Introduction and summary

The Second Bank of the United States (1817–36) was chartered by the federal government for a 20-year period and it resembled a modern central bank in its close relationship with the U.S. Treasury and paramount position in the nation's banking system.[1] It was conceived in response to a fiscal crisis during and following the War of 1812. The bank's charter had a tortuous legislative history, and there was intense political and judicial controversy throughout the bank's existence, culminating in the "War on the Bank" by President Andrew Jackson and the ultimate refusal of Congress to renew its charter.[2] The "Panic of 1819" was a banking crisis and economic contraction that was blamed (rightly or wrongly) on tight credit policy that the bank had imposed in order to recover its solvency after mismanagement in its early days of operation. The subsequent period, 1819–32, was characterized by prosperity and stability on the whole, but there were some minor financial crises that did not have apparent causes. Finally, some contemporary observers and historians have argued that actions taken by the national bank during the Jacksonian "war" may have partly caused the "Panic of 1837," another banking crisis and economic contraction, which occurred shortly after the Second Bank of the United States lost its federal charter.

The consensus among historians is that the Second Bank of the United States (which I call the U.S. Bank for short) was politically controversial because it involved an expansion of federal powers that many Americans in that day resisted on general principle; and because the monetary discipline that it was designed to impose on state-chartered banks was costly to those banks and thus engendered a powerful industry lobby in opposition to it. A predominant view (emphasized particularly by Hammond, 1957) is that, while various classes of indebted persons often expressed hostility to the bank and were sometimes mobilized to support politicians who opposed it, those debtor constituencies were not the mainspring of opposition. On the whole, other historians do not dispute Hammond's view. It is generally thought that, in fact, the U.S. Bank did not act in a predatory way toward the state banks.[3] Regarding the economic management of the bank, there is wide agreement that there was disastrous mismanagement during the first two years of operation but, after a change of leadership, very capable management subsequently.

The thesis of this article is that conflict between debtors and creditors regarding economic policy may have played a large role, both politically and economically, throughout the history of the U.S. Bank. This conclusion is only tentative. It rests on some theoretical premises that are plausible but not yet rigorously proven. If they are valid, historical research suggested by their implications may overturn them nevertheless. However, if correct, this explanation can account for four aspects of the history of the U.S. Bank that other explanations have not addressed convincingly: 1) Why a large number of legislators changed positions, in both directions, during the debate on the charter; 2) Why a demonstrably incompetent president and some venal senior managers were initially selected; 3) Why states whose legislators had eventually supported issuance of the U.S. Bank charter shifted to oppose the bank after capable and honest management was installed; and 4) Why several, relatively minor, financial crises occurred during the period while the bank was capably managed and before the conflict about renewing its charter reached its apex.

The interpretation of the U.S. Bank offered here rests on theoretical premises about two related matters. One is the relationship between the structure of the banking industry in an economy and the macroeconomic

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performance of that economy, particularly in times of high inflation and banking crises. The other is the nature of voters' preferences over those macroeconomic outcomes, and the way in which political institutions translate those preferences into legislation or regulation that affects the structure of the banking industry. I discuss these matters in turn in the following two sections. Then I provide an overview of the history of the U.S. Bank and discuss how the theories outlined in this article shed some light on the bank's performance.

Premises about banking structure and macroeconomic performance

The analysis to be offered here is based on the implications for macroeconomic performance of whether or not banks' criteria for making loans and for issuing money are set centrally. I call a banking system *unified* if those criteria are set centrally and *divided* otherwise. An economy has a unified banking system if it has either a monopoly bank (or a bank capable of maintaining a position of industry dominance) with strong central management or a public authority that sets and enforces industry-wide standards to which all banks must adhere. An economy has a divided banking system if it has many banks and they are not effectively regulated or, alternatively, if it is dominated by a single, unregulated bank, but the branches of that bank have substantial independence from the head office. I argue later in this article that the U.S. Bank itself was a divided banking system of the latter type, and that the U.S. financial system as a whole was divided both for this reason and also because of the survival of the state-chartered banks (a divided system of the former type).

This section provides a sketch of a theory (that is, what economists call a reduced-form model) of banking equilibrium. In the theory, lending and money creation are conflated (treated as one variable) and high inflation and banking crises are also conflated. Although lending and money creation technically are related (because net money creation by a bank is the excess of the amount of loans it makes plus the amount of notes it issues over the amount of deposits it takes), what is relevant for this sketch is that lending and money creation are both banking activities that are profitable and socially beneficial in moderation, but that can be overdone in the sense of making imprudent, risky loans or issuing more monetary claims than may be possible to honor if demand for redemption is high. Overdoing lending or money creation causes some economic loss, often involving a banking crisis or an episode of high inflation. These two forms of loss have the common feature that a single bank or group of banks can cause a loss to the banking industry and the economy as a whole, not only to itself. (An economist would say the offending bank imposes a negative externality on the industry and the economy.)

I sketch arguments for the following three conclusions, which I adopt as premises in my subsequent analysis of the U.S. Bank. Of course, given the heuristic character of these arguments, one should regard them as merely approximate ideas about the macroeconomic implications of alternative banking-industry structures.

- Excessive lending and money creation are avoided in the equilibrium of a unified banking industry.
- A divided banking industry has a *static equilibrium*, in which excessive lending and/or money creation are the norm and the industry consequently suffers ongoing losses due to crises and/or high inflation.[4]
- A divided banking industry may also have a *dynamic equilibrium*, in which excessive lending and money creation, and consequent losses due to crises and high inflation, are avoided on the whole. If banks' decisions are not directly observable by one another and if occasionally there are economic circumstances (such as a run on an individual bank or an uptick in inflation) that banks might impute—rightly or wrongly—to excessive lending or money creation by their competitors, then there may be episodic "industry wars," in which such excessive activity does temporarily take place, with attendant losses to the industry until normal conduct is restored.[5]

Some simple algebra is helpful to derive these results. Consider an activity that a bank can do to excess. Let x denote the amount of excess activity in which each bank engages and X denote the aggregate amount of excess activity in the banking industry. Suppose that a bank makes revenue of ρ per unit of its own excess activity and that it incurs cost of λ per unit of excess activity in the industry. That is, if a bank's excess activity is x and the industry's excess activity is X, then the bank's profit is

$$\pi(x, X) = \rho x - \lambda X.$$

From the perspective of the bank in question, the industry level of excess activity is the sum of that due to itself and that due to all other banks. Let x^* denote the level due to the other banks, so that $X = x + x^*$. Think of a unified banking industry as an industry consisting of a single bank, so that $x^* = 0$ in a unified industry.

Now the profit of a bank can be rewritten as

$$\pi(x, X) = \rho x - \lambda(x + x^*) = (\rho - \lambda)x - \lambda x^*.$$

Make the assumption that a bank chooses its level of excess activity by maximizing its profit without regard

to how its choice will influence the choices of its competitors. (Economists call this the Cournot–Nash equilibrium assumption.) On this assumption, a bank will not engage in excess activity (that is, will set $x = 0$) if $\rho<\lambda$ but will engage in as much excess activity as possible if $\rho>\lambda$. Call this the *static equilibrium* of the banking industry. For convenience, assume that there is a finite, positive maximum level of $\bar{x}$ excess activity. If $\rho>\lambda$, then the static equilibrium is for every bank to set $x=\bar{x}$.

In a unified industry, profit maximization by the single bank is the same thing as profit maximization by the industry. In a divided industry, however, they may diverge. To see this, consider an industry with two banks, 1 and 2. Let x_1 and x_2, respectively, denote the excess-activity levels of banks 1 and 2. Under the assumption that $\rho>\lambda$, $x_1 = x_2 = \bar{x}$. Total industry profit is the sum of the profits of the two banks, which is $2\pi(\bar{x}, 2\bar{x}) = 2\rho\bar{x} - 4\lambda\bar{x}$. Consider, for example, $\rho = 3$ and $\lambda = 2$. Then $\rho>\lambda$, so $\bar{x}$ is each bank's individual profit-maximizing choice, so the total industry profit is $-2\bar{x} < 0$. If both banks had refrained from excess activity, then total industry profit would have been 0. That is, in this example, the individual profit-maximization decisions of banks do not lead collectively to the maximum feasible level of industry profit.[6]

Bankers in a divided industry might try to achieve informal coordination to mitigate the loss that they would collectively suffer in static equilibrium. The ongoing nature of their relationship as competitors, which is ignored in the above explanation of why each of them would rationally decide to participate in the static equilibrium, can provide a way out of their dilemma.[7] For specificity, continue to assume that $\rho = 3$ and $\lambda = 2$. Also assume that the bankers make choices at each date 0, 1, 2 ... and that they discount future profits by factor δ between 0 and 1. That is, if a banker chooses excess activity x_t at each date t and the total industry level of excess activity is X_t, then the banker's discounted profit is $\sum_{t=0}^{\infty} \delta^t \pi(x_t, X_t)$. To reformulate the assumption that bankers neglect the effect of their own choices on their competitors' choices in a way that takes explicit account of their repeated information, assume that bankers neglect the effect of their own choices on their competitors' *simultaneous* choices, but that each banker recognizes that competitors can base their current choices on information or inference about the banker's past choices.

Now consider a divided industry consisting of two banks, and think about an implicit or explicit agreement between the bankers to refrain initially from excess action (that is, to set $x_0 = 0$), but to switch irrevocably to the static equilibrium level (that is, $X = \bar{x}$) after observing an apparent violation of the agreement. For the moment, assume that bankers accurately observe one another's choices.

Consider whether the bankers have incentive to honor this agreement. If all do honor it, then each banker receives discounted profit 0. Consider a banker who decided to violate the agreement, say at date 0, by setting $x_0 > 0$. The banker's profit at date 0 would be $(\rho - \lambda)\, x_0 = x_0$. Thereafter, in the ensuing static equilibrium, the banker's profit each period is $\rho\bar{x} - 2\lambda\bar{x} = -\bar{x}$. The banker's discounted profit from violating the agreement is thus $x_0 - \sum_{t=1}^{\infty} \delta^t \bar{x} = x_0 - (\delta/(1-\delta))\bar{x} \le ((1-2\delta)/(1-\delta))\bar{x}$. If $\delta > 1/2$, then the discounted profit from violating the agreement is negative and, therefore, the banker has an incentive to keep the agreement. Call such an incentive-compatible agreement a *dynamic equilibrium*.

If $\delta > 1/2$, then it is really not necessary to switch to static equilibrium forever. Maintaining the static equilibrium for a sufficiently long time and then refraining again from excess activity (that is, replacing ∞ by a sufficiently large, finite, upper limit of the discounted sum of profits) would preserve incentive compatibility.

Now suppose that bankers do not directly observe one another's choices, but that rather they observe some indirect evidence that is subject to occasional, random, disturbances. In particular, although all bankers are keeping their agreement, they sometimes receive the sort of evidence (such as an uptick of inflation or a spate of withdrawals by depositors) that would ordinarily result from a violation. When this occurs, then all the bankers will revert to static equilibrium for a finite period and subsequently return to cooperation. If the errors are sufficiently rare, then the inequality of discounted profits that determines incentive compatibility of the agreement will be almost identical to the corresponding inequality that has just been derived for an industry where bankers observe one another's choices directly, and this inequality will hold in expected-value terms. That is, in an industry where such observation errors occasionally occur, dynamic equilibrium will exhibit a pattern of cooperation that is occasionally broken but always repaired after a while. During the breaks, however, banks will lend or create money in excess, and banking crises or high inflation will sometimes result.

Premises about voters' policy preferences

Banking crises and high inflation affect the general public, as well as the banking industry. In most macroeconomic models, all persons are identically situated and there is a unanimous preference for banking stability and low inflation (or even slight deflation). However, people in actual economies are not all

identically situated. In particular, some people tend to be in debt most of the time (although they may need to pay off their debts periodically to remain creditworthy), while some others are debt free and even hold bonds. It is plausible that such choices are often robust (that is, they would not be reversed by small changes in wealth, interest rates, and so forth) and that they are rational in light of people's endowments, preferences, and so on. Strictly speaking, whether to borrow or to lend is a choice that a person makes in credit-market equilibrium, rather than a characteristic of the person. Nevertheless, I use the terms *debtor* and *creditor* here to refer to people whose characteristics lead them rationally and robustly to be either debtors or creditors throughout most of their lives.

I use the following premises about people's—and specifically voters'—life-cycle credit positions and consequent policy preferences in analyzing the history of the U.S. Bank.

- There are both debtors and creditors in the economy.
- Debtors tend to favor positive inflation and are willing to tolerate some risk of a banking crisis in return for "easy" credit, while creditors favor price stability or deflation and are averse to risk of a banking crisis.

Wallace (1984) emphasizes the significance of these premises (as they apply to inflation, not banking crises) for monetary policy. He provides an economic model that conforms to the first premise and that also conforms approximately to the second. (Holders of money in the initial generation of Wallace's overlapping-generations model, rather than creditors, are the group that is averse to inflation.) A subsequent model that resembles Wallace's, and that can be shown to conform exactly to the second premise (for inflation), is the prototypical model of a debt security in Green (1997), diagrammed in that paper in figure 2. The key to why these models generate disparate preferences regarding inflation is that steady-state inflation is an outcome of steady-state money growth that depresses the real interest rate, and that debtors prefer a low real rate while creditors prefer a high real rate. Dependence of the real interest rate on the rate of steady-state money growth contrasts with typical models in which the real interest rate is assumed to be constant or to be determined by non-monetary factors.

I am not aware of any studies that confirm either of the premises directly. Direct confirmation could be made, in principle, from a large set of observations tracking households' credit histories throughout their lifetimes and including characteristics that might predict disposition to be debtors or creditors. Short of analyzing such a dataset, it is still possible to obtain partial and indirect confirmation. Hendricks (2002) may be seen as providing this.[8] Hendricks begins by providing corroboration of two previously observed facts: that there is tremendous wealth inequality between households with similar lifetime incomes, and that this inequality persists across generations. He then shows that these facts are inconsistent with a life-cycle consumption model, which represents all households as being essentially identical (with wealthier households being scaled-up copies of less wealthy ones), even when modifications are made to account for intergenerational transfers, differences in time preference, and random opportunities for entrepreneurial investment. He concludes that life-cycle models lack an important source of wealth inequality.

Hendricks does not pinpoint the situation postulated in the first premise, but the premise can fit his needs. Notably, if there is a segment of households with income that increases predictably over time and with relatively age-independent consumption preferences, while other households' income is a constant or decreasing function of age, then the increasing-income households would maximize utility subject to their lifetime-budget constraints by borrowing when young and repaying with their higher income when old. In contrast, other households with the same total lifetime income would save and subsequently spend their savings, or simply consume their income if they had time-constant income, and so would not go into debt. That is, the increasing-income households would have negative wealth throughout their lives, while other households would have nonnegative wealth. Moreover, under the plausible assumptions that whether income is increasing or decreasing as a function of age is correlated with occupation and that occupation is intergenerationally correlated, the resulting wealth inequality will also be correlated. Thus Hendricks' findings provide support for the first premise.[9]

The preceding discussion has entirely concerned inflation and has not mentioned banking crises, to which the second premise refers. The notion that creditors (that is, bankers and depositors in banks) are more averse than debtors to banking crises is intuitive, especially in the early nineteenth century U.S. context where (as I discuss below) debtors were able to get political protection from their creditors during a crisis. Nevertheless, it would be desirable to have an economic model to provide a foundation for the premise and also direct evidence in favor of the premise. Since I discuss inflation consequences of the U.S. Bank in the next section, as well as banking-crisis consequences, the assertion in the second premise regarding banking crises is not absolutely required for the analysis of the U.S. Bank to be sound.

The Second Bank of the United States

The premises discussed in the previous two sections seem to fit the Second Bank of the United States well, and they provide a quite distinct insight from the conventional analysis. The U.S. Bank was originally proposed to Congress in 1814. Congress granted a charter in 1816 to operate for a period of 20 years. The bank began to operate in 1817 and was converted into a Pennsylvania state-chartered bank in 1836, after Congress declined to renew its federal charter.

The U.S. Bank was conceived in an environment of financial crisis. The United States declared war on England in 1812 and narrowly survived the war, which ended with a negotiated peace in 1814. The U.S. government bore extraordinary war expenditures. At the same time, tax revenues (principally import duties on goods imported from England during peacetime) plunged. The U.S. financial system was based on state-chartered banks, which expanded their note issue and subsequently were unable to redeem their notes for specie. Because these notes were not redeemable and suffered high inflation, and because the notes of most banks were not accepted in trade except close to their location of issue, it would have been fruitless for the government to accept them in payment of taxes. Since taxpayers could not obtain specie, they could not pay their taxes. In large part because of credit risk due to this situation, even short-term government debt sold at a substantial discount (Wright, 1941, pp. 276–279).

The conventional analysis is that, as an economic institution, the U.S. Bank was disastrously managed in its first two years but, on the whole, very capably managed thereafter. This abrupt change reflected a change in leadership.[10] The president of the bank during those first two years, William Jones, was essentially a political choice—preferred for the position by the U.S. president and secretary of the Treasury (James Madison and Alexander Dallas, who appointed five of the bank's directors and apparently lobbied actively to influence the election of the remaining 20), but had neither the experience nor the ability to be a capable and judicious banker. In contrast, each of the two subsequent presidents, Langdon Cheves and Nicholas Biddle, was elected by the bank's directors with the expectation that he would act as a capable and judicious banker, and each amply justified that expectation by his performance.

The U.S. Bank operated in an economy in which there were already over 200 state-chartered banks (Wright, 1941, p. 258). Indeed, one of the main motives for establishing the U.S. Bank was to impose discipline on the state banks. Both impressionistic and quantitative studies have concluded that the U.S. Bank acted in a non-predatory way toward the state banks, although it did constrain their profits by imposing discipline and by competing vigorously. However, state bankers complained strenuously that the conduct of the U.S. Bank was unfair to them and contrary to the public interest. These bankers' complaints and their view of the role of the U.S. Bank were taken seriously by citizens, especially in the southern and western states, who supported the sustained and aggressive campaign of Andrew Jackson's administration against the U.S. Bank. That campaign, which reached its peak during Jackson's second term (beginning in 1833), included withdrawing the federal government's deposits, refusing to accept notes of the U.S. Bank in payment of taxes, and an intense and ultimately successful political effort to prevent renewal of the bank's federal charter.

Those southern and western states were the ones in which it was most common for banks to issue a greater value of notes than they were able to redeem for specie. They were also the states where, during the Panic of 1819, laws were passed that impaired banks' ability to take possession of collateral and sell it to discharge loans that were in default. These two facts suggest that in the southern and western states, debtors were politically decisive, and that those debtors favored or at least tolerated a policy regime that permitted bankers aggressively to expand the money supply.

As a political institution, the U.S. Bank was one of the most intense objects of controversy in U.S. history. The original charter was a subject of extended debate throughout a two-year period, during which seven attempts were made to pass it. One of these attempts ended in a presidential veto. The original petition to Congress for a bank to be chartered had been submitted by the New York business community and received strong support from business leaders in Philadelphia, where the bank was ultimately headquartered. New York and Philadelphia, the two primary U.S. financial centers, were located in the states where it is reasonable to suppose that creditors were most politically dominant, as they likely were to some extent in most of the northeastern states. The petition emphasized that the U.S. Bank would provide a sound national currency, discipline the state banks (which in some states would otherwise continue to issue unsound currency), and provide a serviceable medium for payment of taxes so that the federal government could balance its budget and repay its debt. That is, the petitioners from these creditor-dominated states supported a contractionary monetary and fiscal regime that would be expected to produce relatively high real interest rates.

However, when the charter ultimately did pass, much of the support for it came from the southern and

western states.[11] That is, support came primarily from the debtor-dominated states that later were most critical of the U.S. Bank's conduct.

The conventional analysis of the politics of the original U.S. Bank charter emphasizes considerations of party and ideology, which are only indirectly related to the economic function of the bank. The fact that legislators' votes were determined as much by their regions as by their parties casts doubt on that analysis.[12] At the same time, there are three puzzles that are challenges for the explanation that I am proposing. Why did debtor-dominated states support a bank proposed by creditor-dominated states? Why did creditor-dominated states withdraw their support for a bank that they had proposed? Finally, why did the debtor-dominated states quickly become dissatisfied with the bank?

If the premises enumerated in the previous two sections are correct, then one can resolve all three of these puzzles by paying attention to the decentralized corporate structure of the U.S. Bank, which made the U.S. Bank itself and the U.S. banking system (consisting of both the U.S. Bank and the state banks) a divided banking system. As discussed earlier, a divided banking system has two equilibriums that differ in their levels of money creation and exposure to banking panics. As discussed in the previous section, these differences between the equilibriums can result in differences between their distributive implications. While the original petition to Congress to charter a bank did not envision branches (and thus did envision a unified banking system with a dominant, centrally managed bank at its head), most of the draft charters subsequently considered did authorize the U.S. Bank to establish branches. By early 1817, when the bank went into operation, 16 branches had been established in addition to the head office in Philadelphia.[13] Each branch had its own board of directors, whom the charter specified were to be appointed by the parent board in Philadelphia. A branch board was to elect one of its members as branch president. Each branch had a cashier, an employee who managed its day-to-day business, whom the charter also specified was to be appointed by the parent board.

The initial rationale for authorizing the establishment of branches was to impose discipline on state banks operating in markets far from the head office and to create a uniform, nationwide currency. In order to achieve the latter goal fully, notes issued by any branch would have to be payable specie at any other branch. Preferably other branch obligations, including drafts and inland bills of exchange, should also be payable. While the charter did not require the bank to operate according to this rule, that was the expectation of the U.S. Bank's initial proponents. In principle, the charter enabled the head office to limit the value of notes issued by the branches because the paper notes themselves had to be obtained from the cashier in Philadelphia. However, this arrangement was not self-enforcing. Rather, it placed the burden on the cashier and, ultimately, the directors of the head office to monitor note issuance by branches and to constrain the decisions of branch directors who might be politically influential. Moreover, it did not address the problem of limiting other sorts of branch obligations, which were more difficult to monitor than note issuance because they required detailed knowledge of the operating procedures of each branch. Even an experienced cashier in Philadelphia had difficulty in this regard. (Catterall, 1902, p. 395.)

I have already mentioned William Jones, the first president of the U.S. Bank. He was primarily a politician. He lacked the experience or ability to head the nation's largest bank and to play a role akin to that of a central banker. As a businessman, he had gone into bankruptcy. He had been regarded as incompetent during a brief tenure as Treasury secretary. In fact, the bank's original directors shared these traits on the whole. They appointed branch directors who, as a group, did not exhibit high character, competence, or political independence. (Catterall, 1902, p. 32.) With such leaders, and without close and competent central oversight, a number of branches located primarily in debtor-dominated states engaged in dangerously expansive note issuance and lending.[14] That is, a policy regime went into effect that closely resembled the static, high-inflation equilibrium discussed earlier in most respects.

These considerations suggest that the character of the directors and officers was crucial to determining whether the static, high-inflation equilibrium or the dynamic, low-inflation equilibrium would result from the founding of the U.S. Bank with its decentralized corporate form. Evidently the representatives of the creditor-dominated, northeastern states initially believed that those directors and officers would be conservative bankers who would implement the low-inflation equilibrium. It is plausible that, sometime between 1814 and 1816, both they and the representatives of the debtor-dominated, southern and western states changed their beliefs. They came to recognize that a combination of direct government appointment of some of the Philadelphia directors and politically influenced election of the remaining directors would likely produce a board with the characteristics of the actual original board, and that the head-office board would then appoint branch boards that would be inclined to behave in accordance with the high-inflation equilibrium. This supposition provides an explanation of why many legislators representing the northeastern states abandoned

their support for the U.S. Bank, as well as why many southern- and western-state legislators ultimately did vote to charter the bank. That is, the supposition resolves the first and second of my puzzles.

Let's turn now to the third puzzle: Why the southern and western states' citizens views shifted toward opposition to the U.S. Bank, particularly after the equilibrium initially supported by that institutional framework turned out to be the one that they had hoped for.

A conventional view, to which I present an alternative or at least a supplement, attributes the shift to the fact that the U.S. Bank was required by its charter to redeem its notes for specie, so inflation could not go on indefinitely. Beginning in mid-1818, the bank was forced to demand payment of loans rather than renewing them, in order to obtain specie with which to make redemptions. To the extent that loans were repaid in state banknotes that the U.S. Bank redeemed, the balance-sheet pressure was also partly transmitted to state banks. The resulting contraction of credit was widely thought to have contributed to, or at least increased the hardship produced by, the recessionary Panic of 1819. Furthermore, when Langdon Cheves became president of the bank at the beginning of 1819, he forbade the branches to issue notes and instructed the head office not to purchase bills of exchange issued by the branches (Catterall, 1902, p. 70). The consequences of this policy were felt most heavily by farmers and other users of bank credit. Thus, according to this view, debtors turned against the bank because they blamed it for causing them unnecessary hardship during and after the panic.

This is a very plausible view. It is consistent with documentary evidence about when and where sentiment turned against the U.S. Bank. It is also consistent with the intuitive idea that people whose lives had been ruined or severely disrupted by being held to the harsh terms of a contract in circumstances for which it was not designed (that is, whose loan defaults were due to exceptional macroeconomic conditions rather than to their own indolence or improvidence) would become implacable enemies of the institution enforcing the contract. Here are two weaknesses of the view, although these considerations are far from being decisive refutations of it. First, in a number of the debtor-dominated states, laws were passed that effectively protected defaulting debtors from action by their creditors.[15] It is probable that, once such a law had been passed, banks largely left defaulting debtors alone rather than taking costly, unproductive actions against them. Thus, to the extent that such a law had been passed promptly, there would be relatively few debtors who were directly, personally harmed by their banks. Second, the view does not explain why debtors should have strong animosity to the U.S. Bank as an institution, rather than to the officers who had caused the difficulty by inept or corrupt management. In particular, after President Jones had resigned in disgrace at the beginning of 1819 and President Cheves had subsequently forced many of Jones's subordinates out of office and prosecuted several of them, why was there still animosity to the bank after 1822, when the Panic of 1819 had waned and Nicholas Biddle had replaced Cheves as president? Why was animosity not directed exclusively toward Jones and perhaps Cheves (who initially had no choice but to continue the contractionary policies adopted to keep the bank solvent at the end of Jones's tenure), rather than toward the bank and its newly elected president?[16] Of course, if one believes that public animosity is frequently misdirected at institutions and public figures whose actual conduct has been creditable, then one will not lose much confidence in the conventional explanation of the bank's fall from popularity on account of that having happened here. In summary, the conventional view explains well why support for the U.S. Bank eroded in the southern and western states.

Nevertheless, the contrast between the static and dynamic equilibriums of a divided banking system suggests an additional explanation. Cheves and Biddle may have accomplished a shift from a high-inflation to a low-inflation equilibrium. If so, then it is obvious why debtors who had supported chartering the U.S. Bank in the expectation of an expansionary outcome retracted that support in 1819. It is certain that the money stock per capita steadily decreased to a stable level attained by the late 1820s. Catterall (1902, p. 444) cites a congressional document that calculates the amount of money (including state banknotes, U.S. Bank notes, and specie) in circulation per capita as having been $11 in 1816, $7.75 in 1819, $6 in 1829, and $6.35 between 1829 and 1834. It is clear that the gradual decline, on average, in circulation per capita during 1819–29 is attributable to the Cheves–Biddle regime. Credit for the steeper decline during 1816–19 cannot be attributed as surely, since Jones had to curtail the bank's operations in the second half of 1818 and then the bank's transition from Jones to Cheves as president occurred in January 1819. Both the description of the U.S. Bank's own operations during 1817–18 and the evidence that state banknotes continued to inflate during that period suggest that most of the 1816–19 decline in circulation per capita probably occurred in 1819.

Changes that Cheves and Biddle made in operating and management procedures can be viewed as attempts to alter or mitigate the features of the U.S. Bank's corporate structure that constituted a divided banking system. First of all, Cheves' policy in 1819 established

the precedent that the bank's management had the option not to permit notes of one branch to be presented for specie payment at another branch. Moreover, he required each branch not to pay bills of exchange issued by another branch, unless the issuing branch had made an inter-branch deposit from which the payment could be made (Catterall, 1902, p. 76). To address the problem of branch interrelatedness at its root, he assigned a notional capital to each branch and required prompt payment of interbranch debt, so that each branch had to stand financially on its own rather than being a free rider on the others and the head office (Catterall, 1902, pp. 63, 76). Biddle reduced the autonomy and privacy of the branches by having the cashier of each branch report directly to the head office, rather than delegating the supervision of the cashier substantially to the branch president as before, and empowering Philadelphia directors resident in branch cities to attend the board meetings of those branches. He also instituted a practice of filling branch cashier positions by promoting seasoned Philadelphia employees and avoiding moving people to cities where they had formerly lived (Catterall, 1902, pp. 102–104).

In a decentralized economy in which a static equilibrium had been in effect for a period of time and, subsequently, a dynamic equilibrium had been in effect, one would expect to observe two distinctions between the earlier and later periods. First, policy would be less expansionary on average during the later period. Second, there would be brief periods of some sort of financial disturbance (such as high-inflation episodes in dynamic equilibrium) in which the equilibrium had apparently broken down and then been restored. These episodes would occur in circumstances where it might appear as though banks (or bank branches) could be overextending, but without direct evidence of inappropriate decisions or conduct. These comparisons between the two periods are predictions that follow from a supposition that an equilibrium shift has taken place. Fulfillment of both predictions should be taken as evidence of a shift.

To examine the U.S. economy during the existence of the U.S. Bank in these terms, we might specify the first period as having occurred during 1817–18 and the second period during 1819–32. This specification recognizes that effects of the Jackson administration's active hostility to the bank and of the bank's forceful strategic reaction overshadowed the fundamental characteristics of the bank's equilibrium after 1832. The discussion of money stock per capita above provides some evidence that the first prediction from an equilibrium shift was fulfilled. Regarding the second prediction, there were episodes of banking disruption in 1828 and particularly in 1832 that fit it well (Catterall, 1902, pp. 135–137). This evidence seems favorable toward, albeit not conclusive of, a shift from a static equilibrium to a dynamic equilibrium coinciding with Jones's resignation and Cheves' election as president of the U.S. Bank.

Conclusion

The Second Bank of the United States was an institution of first-rank importance, both politically and economically, during the early nineteenth century. This article has brought recent contributions to the theory of industrial organization and monetary economics to bear, in order to link the political and economic aspects of its history more closely and insightfully. The main, albeit tentative, conclusion of the study is that conflict between debtors and creditors regarding the U.S. bank and its policies may have played a larger role in the political fortunes of the bank than historians have generally understood.

NOTES

[1]The First Bank of the United States (1791–1811) was a previous economic and political experiment with a national bank.

[2]A legacy of the Second Bank of the United States is *McCulloch v. Maryland* (McCulloch v. Maryland, 17 U.S. 316, 1819), a case that became one of the pillars of U.S. constitutional law. The Supreme Court ruled that the Constitution should be read as granting "implied powers"—powers that are reasonable means for exercising narrower powers explicitly enumerated in the Constitution and that are not explicitly prohibited—to the federal government. From this general principle and the specific premise that a national bank was a reasonable means to exercise explicit federal powers such as collecting taxes, borrowing money, regulating commerce, and so forth, the court inferred that the charter of the Second Bank of the United States was constitutional.

[3]An econometric study of the U.S. Bank by Highfield, O'Hara, and Woods (1991) supports previous historians' impressionistic conclusions to this effect. Nevertheless, there was one very important state (New York, where Governor Martin Van Buren was a national leader of opposition) in which state banks were limited by charter from offering loans at as low a rate as the U.S. Bank could offer (Catterall, 1902, p. 166). So its avoidance of predatory conduct did not necessarily mean that the U.S. Bank was not a genuine threat to state banks.

[4]Aizenman (1989) derives this proposition in a model in which real money balances are assumed to be an argument of agents' utility function (or, more generally, an exogenous demand function for money is assumed). Hørder (1997) derives the proposition in an overlapping-generations model of fiat money.

[5]Zarazaga (1992, 1993) derives this proposition in a dynamic version of Aizenman's model.

[6]This exemplifies a more general phenomenon known to economists as "prisoner's dilemma" and the "tragedy of the commons," on account of early examples that were studied.

[7]The following discussion presents the intuition behind a result of Green and Porter (1984) that Zarazaga used. Abreu, Pearce, and Stacchetti (1990) provide an improved, but more technically demanding, result.

[8]I am grateful to Anna Paulson for pointing out the relevance of Hendricks' study.

[9]Bayes' Theorem states that an observation (such as Hendricks' findings) provides support for a hypothesis (such as the first premise) if the hypothesis raises the conditional likelihood of the observation (as this paragraph argues that the first premise does for Hendricks' findings).

[10]The following facts, and the other facts in this section for which explicit citations are not given, are documented by Catterall (1902).

[11]The New England and middle states (New York, New Jersey, Pennsylvania, and Delaware) voted 45–35 against the charter in the House of Representatives, while the southern and western states voted 45–26 for it. The Senate vote was 22–21, with more than half of the votes for the charter coming from the South and West (Hammond, 1957, p. 240).

[12]Crucial support for the charter came from defecting members of the Federalist party (Hammond, 1957, p. 241).

[13]A total of 28 branches were eventually established, several of which were closed while the bank still had its federal charter.

[14]Some of this activity, particularly at the Baltimore branch, involved transactions that were outright inappropriate and even fraudulent. However, the extent of this activity and its relative concentration in the southern and western branches suggest that it was an equilibrium phenomenon rather than solely a manifestation of individual weakness or greed.

[15]Such laws were passed in Tennessee, Kentucky, Ohio, Missouri, Illinois, and Indiana (Catterall, 1902, p. 83). Although these laws superficially seem to be a time-inconsistent obstruction of voluntary agreements, there is a good case that their passage was actually efficient from an *ex ante* perspective. Green and Oh (1992) and Bolton and Rosenthal (2002) have made this case.

[16]Wright (1953) documents that, even before Cheves became president, some contractionary actions were taken on Biddle's recommendation that were necessary to correct Jones's mismanagement. However, Wright notes that Biddle managed to give this advice without taking a publicly visible role.

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