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## Disciplines

Economics

## Comments

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# A History of Public Sector Pensions in the United States 

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The Wharton School of the University of Pennsylvania

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# Chapter 5 <br> Management of the U.S. Navy Pension Fund 

The management of the navy pension fund is of historical significance because it represents one of the earliest examples of a pension fund managed by the government. The unique character of this fund, including its investment in private equities, provides a series of important parallels to the contemporary debate concerning the management of employer pension and Social Security trust funds in the twenty-first century. For this reason, the portfolio decisions of the trustees of the navy pension fund, the responses of Congress to fluctuations in the size of the fund and its perceived surpluses, and the response of Congress to investment outcomes are examined in considerable detail.

As we noted in Chapter 4, during the Revolutionary War, the Continental Congress began to provide disability pensions for military personnel. By the 1790s, navy pensions, like those for army veterans, were paid from the general fund of the U.S. Treasury. Additional legislation passed in 1799 and 1800 established an autonomous fund to support pension payments for naval personnel. These payments were to be financed by the sale of prizes. After the claims of the crew and prize courts were honored, the residual revenues from the sale of ships and/or contraband seized from enemy or quarantined vessels were placed in the navy pension fund. Recall that a portion of the residual was reserved in a separate fund for privateer's pensions (see Chapter 4).

The 1799 legislation stated that the managers of the fund should invest all monies in "six percent or other stock [that is to say, bonds] of the United States, as a majority of them, from time to time, shall determine to be most advantageous" (Seybert 1818). ${ }^{1}$ Legislation enacted in 1800 defined the eligibility for the receipt of a pension and its amount; created the administrative structure of the fund; and established the Secretaries of the Navy, Treasury, and the War Department as the managers of the fund's portfolio. In fact, as we shall see below, the secretaries of the executive departments were trustees, and the management of the fund was placed in the hands
of their agents. In a significant change in policy, the 1800 legislation also authorized the commissioners to invest the funds "in any manner which a majority of them might deem most advantageous" (Seybert 1818). This change in their charge gave the secretaries complete freedom in managing the fund's portfolio, including the freedom to purchase private assets for the fund. Within a decade, the trustees used this flexibility to begin purchasing private equities for the pension fund.

This chapter reviews the history of the management and investment activities of the navy pension fund. The material includes a detailed review of the assets held by the fund at year-end from 1800 until the dissolution of the fund in 1842; a summary of the annual revenues and expenditures of the fund is also included. Examination of the investment process including the payment of commissions to salaried agents, reinvestment of idle cash balances, and some failures in obtaining dividend disbursements from the private bank stock shows some of the problems associated with the purchase of private assets in a public pension fund. The next chapter discusses the antebellum financial markets in order to describe the assets that were available to the fund and the general economic conditions affecting the investment environment faced by the fund's managers. The fund's unique experience with the purchase of private assets is then examined with special attention being given to the details of the fund's investment in stock of a particular firm—the Columbia Bank. Together these two chapters provide a unique perspective on today's debate concerning the management and structure of pension funds in the twenty-first century, in particular the reform of the Social Security system.

## The Management of the Navy Pension Fund Portfolio

The trustees of the navy pension fund did not employ actuarial analysis to project either the number of eligible beneficiaries or the expected costs of future liabilities. Revenues were unpredictable and depended on the skill and fortunes of U.S. seamen and the frequency and length and breadth of international conflicts. As a result, both assets and liabilities fluctuated with national fortunes in war and peace. The fund also faced management problems associated with the quality and integrity of its trustees and agents. The cabinet secretaries who administered the fund were of varying quality, and their tenure depended on presidential preferences and political expediency. Most of the trustees had little or no experience in managing an investment portfolio. There were no rules or guidelines for prudent investment for a pension fund with so much uncertainty regarding inflows and outflows. These circumstances represented a tenuous structure for the foundation for financing navy pensions over a long period of time. Despite these initial problems, the pension fund lasted, in one form or another, well into the twentieth century, with some significant interruptions along the
way to be sure. However, one of the main conclusions to be drawn from the fund's history is that its longevity was more of a tribute to tradition and public sector inertia than to efficiency.

The first asset purchases for the navy pension fund were made in 1800 through the fund's agent George Simpson. On November 11, 1800, Simpson made four purchases from A. Regnaud in the Philadelphia market. Regnaud apparently made these purchases for the fund and then "sold" the securities to Simpson, who was the agent of the Commissioners of the fund. The bonds are listed as being purchased by Simpson from Regnaud. The records do not indicate from whom Regnaud purchased the bonds. (The reader should note that throughout this discussion, specific issues of U.S. government bonds are referred to by their coupon yields on $\$ 100$ bonds. So, for example, a "Six" is a U.S. government bond with a 6 percent coupon. This labeling was the tradition of the day in early nineteenthcentury financial markets. The reader should also note that U.S. securities were typically, and somewhat confusingly, referred to as "stock.") The initial investment of the fund included 30 shares, at $\$ 100$ par value per share, of the U.S. 8 percent bonds at a price of $\$ 108.25,80$ shares of these "Eights" at $\$ 108.00$, and 89 shares of U.S. navy 6 percent bonds at a price of $\$ 90.00$. In addition, the trustees bought U.S. 6 percent stock [bonds] with a par value of $\$ 4,227.56$ at a discount price of $\$ 88.75$ per share. The total amount invested in this first acquisition was $\$ 23,643.46$. There was a brokerage charge to the fund of 0.25 percent amounting to $\$ 59.12$, and a commission charge of 0.50 percent totaling $\$ 118.54$.

Simpson's transactions with Regnaud were made through the cashier of the First Bank of the United States. After completing the transactions, Simpson retained a cash balance of $\$ 32.76$ and the fund had $\$ 6,024.32$ in cash on hand. This detailed information is included in the first report of the Commissioners of the Navy Pension Fund, submitted by Benjamin Stoddert, Secretary of the Navy, on behalf of the trustees of the pension fund on December 2, 1800, as transmitted to the U.S. House of Representatives. The source of the funds for the purchases was listed as $\$ 23,859.88$ available from prize money. ${ }^{2}$

This purchase is typical of how investments were made over the life of the fund and provides a glimpse at the market in which these transactions took place. The Eights were bought at a premium while the Sixes were bought at a discount indicating that the prevailing market interest rate was about 7 percent. The fact that all four of the initial purchases were made on a single day at prices that seem reasonable-that is, in the neighborhood of market prices-suggests that the market in Philadelphia for U.S. stocks was relatively liquid. The original U.S. debt had been issued in 1790 and was actively traded in Boston, New York, Philadelphia, and Baltimore, with considerable activity in other markets, like Charleston. In 1800, the outstanding issues of U.S. stock could be described as "seasoned," and prices were

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published weekly in the cities with active securities markets. In November 1800 when the U.S. Sixes were bought by Regnaud at $\$ 90.00$, the same security was also quoted in New York at $\$ 90.00$, in Boston at $\$ 91.375$, and in Philadelphia at $\$ 89.75$ (Sylla, Wilson, and Wright 1997).

These purchases in 1800 marked the beginning of a period in which the navy pension fund's assets were invested in interest-yielding securities. The trustees of the fund attempted to remain as fully invested as possible and generally followed a "buy and hold" strategy over most of the life of the fund. The flow of prize monies from the sale of captured ships and contraband that provided the basic capital of the fund are not consistently provided in the annual reports. The data available in these reports show great irregularity and extreme variance in the amount of new monies transferred to the fund from year to year, which as detailed in Chapters 3 and 4, was a pervasive characteristic of the prize system. A basic portfolio strategy would have been to convert cash obtained from the sale of prizes into a regular income flow with the objective of matching income from investments to expected benefit payments. Excluding the extraordinary liabilities levied by Congress in the 1830s (see Chapter 4 above), expenditures from the fund were more predictable and consistent than the flow of new monies into the fund. With a buy and hold strategy for government securities redeemed at par, capital gains and losses would depend on whether the original assets were bought at a premium, yielding a loss, or a discount, yielding a gain. An annual account of the securities held by the fund over its life is provided below.

Creating an annual accounting of the financial status of the fund is extremely difficult given the records that have survived. The poor quality of the financial records of the fund presented earlier scholars with similar problems. For example, William Glasson, an early historian of U.S. pensions, observed: "During a large part of its history, the accounts of the navy pension fund were kept in so irregular a way that it would baffle an expert accountant to prepare a complete and accurate statement of its financial history" (Glasson 1918). Our attempt to construct a series of the annual assets held by the fund led us to the conclusion that Glasson's observation is extremely kind.

Annual reports of the fund vary as to the date submitted to Congress between September and the following January, and they vary in detail regarding vouchers. The 1824 report was not submitted but was reconstructed and finally made available in 1828. Reported income from the fund sometimes confused "reimbursements" with interest and dividends received from investments. In several years, the dividends paid by bank stocks were either not received or were not recorded to the credit of the fund. The results of the periodic and special audits that were conducted differ from the data in the annual reports. Thus, the data in the tables presented below should be regarded as a best approximation of the history of the portfolio of the fund. Curiously, the quality of the reporting of financial
data for the fund is probably better at the beginning of these reports than at the end.

Table 5.1 provides a detailed account of the fund's investment portfolio from 1800 through 1813. It is difficult to determine the exact value of the fund during these years because consistent information on the cash held by the fund is not available. It is clear that the trustees often were unable or unwilling to invest the monies in the fund fully. This fact was all too clear to those monitoring the fund's activity at the time. Indeed, the managers of the fund were periodically rebuked by Congress for maintaining large cash positions instead of purchasing interest-earning assets. An example of this problem was indicated in the trustees' report of 1806 . This report, submitted to Congress after a delay of several months, stated:

This report has been unusually delayed, under the expectation that it would, by this time, have been practicable to include in it an account of the investment of thirtythree thousand dollars, part of thirty-five thousand four hundred dollars received from the treasury in November last, for the navy six per cent stock belonging to the fund; but this expectation has not been entirely fulfilled. It has been found extremely difficult of late to invest money in the public stocks to advantage. (ASP$N A, 1$, no. 57)

The investment portfolio from 1800 through 1808 was allocated entirely in U.S. government stocks. Investments included a mix of coupon amounts including the Sixes, Deferreds, and Eights. In addition, the fund initially acquired the Threes in 1806. (Again, the assets held by the fund, as described in the narrative below, are referred to by their popular, as opposed to their official, designation.) More detailed descriptions of the assets are provided in the appendix to this chapter.

Although the Threes had a lower coupon rate, the price in Philadelphia in 1805-6 ranged between $\$ 59.00$ and $\$ 64.00$, representing a current yield of about 5 percent. The Philadelphia prices of the Sixes and Deferreds at that time ranged from a low of $\$ 89.00$ in 1805 to a high of $\$ 100.00$ at the end of 1806. The Navy Sixes, which were acquired in 1800, were redeemed in 1807, with the proceeds being invested in the Louisiana Sixes and additional purchases of the Threes. The Eights were redeemed in 1809 with the proceeds, surprisingly, given the history of the fund's portfolio to that date, being invested in the stock of a local bank, the Columbia Bank. This investment marks the beginning of the fund's experience with private equities.

The Columbia Bank was chartered in 1793 by an act of the General Assembly of Maryland. The stated purpose of the bank was to promote the agricultural and commercial interests of the state and facilitate the preparations for the permanent residence of Congress within the District of Columbia (Fenstermaker 1965). Additional shares of the Columbia Bank were purchased in 1810, and shares in the Union Bank and the Washington Bank, two other local-that is, D.C.-banks, were purchased in 1811 and

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Table 5.1. Estimated Annual Value (based on cost) of the Naval Pension Fund, with Holdings by Type of Asset, 1800-13

| Year | U.S. debt instruments |  |  |  |  |  |  | Private bank stock |  |  | Portfolio Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sixes | Deferred | Navy | Eights | Louisiana | Threes | Converted | Columbia | Union | Washington |  |
| 1800 | 3,752 | - | 8,900 | 13,900 | - | - | - | - | - | - | 26,552 |
| 1801 | 4,794 | 5,362 | 9,300 | 37,100 | - | - | - | - | - | - | 56,556 |
| 1802 | 4,794 | 5,362 | 31,800 | 37,100 | - | - | - | - | - | - | 79,056 |
| 1803 | 18,621 | 21,504 | 31,800 | 54,400 | - | - | - | - | - | - | 126,325 |
| 1804 | 16,386 | 25,526 | 33,400 | 54,400 | - | - | - | - | - | - | 129,712 |
| 1805 | 25,363 | 45,233 | 33,400 | 55,600 | 5,000 | - | - | - | - | - | 164,595 |
| 1806 | 25,459 | 46,899 | 35,400 ${ }^{(a)}$ | 59,300 | 14,000 | 20,305 | - | - | - | - | $165,963^{\text {(a) }}$ |
| 1807 | 24,501 | 47,002 | - | 59,300 | 14,000 | 29,291 | 3,250 | - | - | - | 177,344 |
| 1808 | 22,784 | 45,230 | - | 59,300 | 14,000 | 30,896 | 3,250 | - | - | - | 175,460 |
| 1809 | 20,962 | 43,466 | - | 59,300 ${ }^{(b)}$ | 14,000 | 30,896 | 3,250 | 48,523 ${ }^{\text {(b) }}$ | - | - | 220,397 ${ }^{\text {b }}$ |
| 1810 | 19,025 | 41,534 | - | - | 38,000 | 30,896 | 3,250 | 60,103 ${ }^{(c)}$ |  |  | 192,809 |
| 1811 | 16,975 | 39,483 | - | - | 38,000 | 30,896 | 3,250 | 60,103 ${ }^{\text {(d) }}$ | 10,690 ${ }^{\text {(d) }}$ | $8,200^{(d)}$ | 206,076 |
| 1812 | 14,796 | 37,305 | - | - | 38,000 | 30,896 | - | 60,103 ${ }^{(\mathrm{e})}$ | 15,340 ${ }^{(\text {e }}$ | $14,260^{(\text {e })}$ | 210,701 |
| 1813 | 12,483 | 34,993 | - | - | 38,000 | 30,896 | - | 60,103 | $15,340{ }^{(f)}$ | $14,260^{(f)}$ | 206,076 |

[^0]1812. In each case, these purchases of shares in privately owned banks appear to be similar to an "initial public offering." Initial purchases of both the Union Bank and the Washington Bank were made in 1811, the year both banks were chartered. On behalf of the navy pension fund, George Macdaniel purchased $\$ 8,000$ worth of shares in the Washington Bank in November after the bank had been chartered in March. An additional $\$ 6,000$ was used to purchase shares in October 1812. Macdaniel also purchased $\$ 10,500$ of shares of the Union Bank in November 1811 after this bank had been chartered in February 1811. An additional $\$ 4,500$ was used to purchase shares in October 1812. Over the period 1809-13, $\$ 89,703$ was expended on the purchases of these local bank stocks. The investment in these banks meant that by 1813, 44 percent of the portfolio of the fund was composed of shares in private, locally traded securities. ${ }^{3}$

The fund grew rapidly over the period $1800-13$, from $\$ 26,552$ to over $\$ 200,000$. The increase in assets is primarily attributable to new prize receipts. However, income from investments tended to exceed the annual cost of the payment to pensioners. There were plentiful opportunities, relatively speaking, for buying securities that were nationally and internationally traded between 1809 and 1813. In addition, there was a large market in U.S. government debt that was available for acquisition. The outstanding value of U.S. debt was approximately $\$ 50$ million during this period (Elliott 1845).

Given these other investment opportunities, why did the trustees choose to invest in local banks that were far riskier than other available assets? Perhaps they were opting for a higher risk and return profile by allocating a portion of their portfolio to private securities, and indeed "There is no doubt that banking was generally profitable during much of the period prior to 1837" (Fenstermaker 1965). The early dividends paid by the Bank of North America were between 12 and 16 percent (of par); the Bank of Pennsylvania paid at least 8 percent per year; the Bank of Virginia had profits ranging from 9 percent in 1806 to 17 percent in 1813; and the Massachusetts Bank paid an average dividend in the last decades of the eighteenth century of over 12 percent. These rates were well above the interest being paid on U.S. government debt and may have enticed the trustees to consider investing a portion of the pension fund's assets in private banks. Still, the fact that only local-that is, D.C.-bank stock was purchased remains curious.

The records of income from investments indicate that in the years between 1814 and 1819 returns from the local bank stocks did exceed the interest rate on the available U.S. government bonds; however, this situation was quickly reversed in the 1820 s, when each of these banks reduced or eliminated dividends, and each ultimately failed. The Columbia Bank paid dividends of around 10 percent in 1814,1815 , and 1817 with lower dividends reported in 1818 ( 5.6 percent) and 1819 ( 7.7 percent). No dividends
from the Columbia Bank were received by the pension fund in 1816. In contrast, the Union Bank and the Washington Bank paid dividends of 12 to 15 percent in 1814, 1815, 1817, and 1819 and a 10 percent dividend in 1818. Once again, no dividends from these banks were recorded by the pension fund in 1816. Thus, in the first decade after the purchase of these shares of private equities, the pension fund received an average return on its total investment of bank stocks of 8.1 percent, including the zero return for 1816.

If the fund managers were seeking risk reduction with portfolio diversification and the potential for higher returns, it is difficult to understand why the narrowly held Washington, D.C. bank stocks were chosen. Other more liquid, nationally traded, and "seasoned" bank stocks that were paying the same or higher dividend yields were available to the trustees. For example, the trustees could have purchased shares in the First Bank of the United States. Stock in this bank began trading after the bank was chartered in 1791, and this stock was very widely traded in Philadelphia, Baltimore, New York, and Boston. On November 11, 1800, when Regnaud made the first purchases of bonds for the fund, the stock of the First Bank could have been bought at a price of 140 (as a percent of par), and was paying an annual dividend of from 8 to 10 percent of par value.

The U.S. government was an original investor in this bank in 1791, putting up 20 percent of the original capitalization of $\$ 10$ million- 25,000 shares at $\$ 400$ per share (Studenski and Kroos 1963). The government had earned a handsome return from this investment prior to the beginning of the navy pension fund in 1800. Together, dividend income and capital gains from sales of shares yielded the federal government an annualized rate of return greater than 8 percent, the stock having traded as high as 150 percent of par. And this return was above and beyond the value of the services of the First Bank with the handling of transactions of the government, including the disbursement of pensions throughout the branches of the Bank. The government sold the last lot of this stock in 1802, but had been a holder of the stock for a decade (Lane 1997). This stock is an excellent example of a high-quality, low-risk asset in which the fund did not invest. Although the First Bank was not rechartered in 1811, the liquidation of the stock was prompt and orderly, with all stockholders being reimbursed at par value for their holdings (Elliott 1845; Hammond 1957; Perkins 1994). The assets of the First Bank were bought up by Stephen Girard, and operated as Girard's Bank even beyond his death in 1831.

Even if one puts aside the opportunities in other bank stocks, by purchasing the three local bank stocks, the commissioners of the fund forfeited liquidity and accepted greater risk for an additional 1-2 percent higher return over U.S. bond yields. Given the uncertain future liabilities of the fund and the uncertain flow of future assets into the fund, this investment choice is unconventional by today's standards of asset management. Furthermore, as the notes to Table 5.1 make clear, these bank stocks were
aquired in "half" shares and "whole" shares. The subscription schedule for the initial capital in these banks provided for a time purchase plan for acquiring the stocks. It is not clear whether the fund paid a market price for the bank stocks or whether these purchases were arranged in some manner consistent with the initial offerings of the capital stock. All of these and subsequent transactions in bank stocks were in one way or another through the agent George Macdaniel, and as will become clear when the particulars of these purchases are reviewed later, the acquisition of the bank stocks for the fund has the scent of insider trading.

Table 5.2 provides the annual estimates of the fund's portfolio for the years 1814 through 1829. The fund more than doubled in size between 1813 and 1814 , as it increased in value from $\$ 206,076$ to $\$ 484,852$. Between 1814 and 1829, the fund doubled again, growing to almost $\$ 1,000,000$. The assets purchased in 1814 and continuing through 1824 were concentrated in the New Sixes issued to finance the War of 1812. Also during this period, there were additional purchases of shares of the Columbia Bank in 1815, 1818, and 1819. These new investments brought the total expenditures for Columbia stock to $\$ 99,502.60$. These additional purchases of private bank stock were made when the fund could have acquired stock in the Second Bank of the United States, which was chartered through federal legislation in 1816 and which began operations in January 1817.

Given that the authorized amount of capitalization of the Columbia Bank was $\$ 1$ million the navy pension fund owned almost 10 percent of the bank. The value of the private securities held by the fund in 1819 was $\$ 129,266$. This meant that 15 percent of the fund's portfolio of $\$ 874,672$ was allocated to these private stocks, which, as we have seen, were yielding about 8 percent per annum. The subsequent financial history of the fund did not prove to be as successful. In 1823-24, Columbia Bank ceased doing business, and it ultimately failed altogether. Although the fund continued to carry Columbia Bank stock on its books valued either at cost or par, these assets are excluded from both tables as of year-end 1824.

The failure of the Columbia Bank coincided with the large-scale redemption of U.S. government debt. Between 1819 and 1829, the Sixes and Deferreds were being retired, along with some of the New Sixes, while the fund acquired the new debt being issued by the treasury in bonds bearing 4.5 percent and 5 percent coupon rates. At the end of 1829 , the majority of the fund was invested in these securities, with a lesser amount in the New Sixes along with the original Threes.

When the Second Bank of the United States began doing business in 1817, it would have been possible for the fund to get in on the initial subscription to the stock of this bank. This was a very large bank by the standards of the day with initial capital of $\$ 35$ million ( 350,000 shares at $\$ 100$ each). As with the First Bank of the United States, the government had the responsibility of subscribing to one-fifth of the stock, and as with that
Table 5.2. Estimated Annual Value (based on cost) of the Naval Pension Fund, with Holdings by Type of Asset, 1814-29.

| Year | U.S. debt instruments |  |  |  |  | Private bank stock |  |  | Portfolio Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sixes and deferred | Louisiana | Threes | New Sixes | $\begin{gathered} 4.5 \mathrm{~s} \\ \text { and fives } \end{gathered}$ | Columbia | Union | Washington |  |
| 1814 | \$42,483 | \$38,000 | \$30,896 | \$283,769 | - | \$60,103 ${ }^{\text {(a) }}$ | \$15,340 | \$14,260 | \$484,852 |
| 1815 | 37,365 | 38,000 | 30,896 | 393,593 | - | 69,103 ${ }^{\text {(b) }}$ | 15,340 | 14,260 | 598,557 |
| 1816 | 32,849 | 38,000 | 30,896 | 393,593 | - | 69,103 | 15,340 | 14,260 | 594,041 |
| 1817 | 25,957 | 38,000 | 30,896 | 531,393 | - | 69,103 | 15,340 | 14,260 | 724,950 |
| 1818 | 21,135 | 19,000 | 30,896 | 687,102 | - | 89,503 ${ }^{\text {(c) }}$ | 15,503 | 14,260 | 877,236 |
| 1819 | 17,830 | 8,740 | 30,896 | 687,103 | - | 99,503 ${ }^{\text {(d) }}$ | 15,503 | 14,260 | 874,672 |
| 1820 | 14,326 | - | 30,896 | 696,536 | - | 99,503 | 15,503 | 14,260 | 870,862 |
| 1821 | 10,601 | - | 30,896 | 721,295 | - | 99,503 | 15,503 | 14,260 | 891,895 |
| 1822 | 6,657 | - | 30,896 | 739,956 | - | 99,503 | 15,503 | 14,260 | 906,662 |
| 1823 | 2,465 | - | 30,896 | 748,051 | - | 99,503 | 15,503 | 14,260 | 910,515 |
| 1824 | - | - | 30,896 | 758,940 | - | - ${ }^{(e)}$ | 15,503 | 14,260 | $819,436^{(\text {e) }}$ |
| 1825 | - | - | 30,896 | 689,670 | \$150,000 | - | 15,503 | 14,260 | 900,166 |
| 1826 | - | - | 30,896 | 707,406 | 150,000 | - | 15,503 | 14,260 | 917,902 |
| 1827 | - | - | 50,896 | 573,020 | 257,736 ${ }^{\text {(f) }}$ | - | 15,503 | 14,260 | 911,252 ${ }^{\text {(f) }}$ |
| 1828 | - | - | 50,896 | 304,401 | 257,736 ${ }^{\text {(f) }}$ | - | 15,503 | 14,260 | 641,633 ${ }^{\text {(f) }}$ |
| 1829 | - | - | 50,896 | 301,669 | 512,011 ${ }^{(f)}$ | - | 15,503 | 14,260 | 950,675 ${ }^{\text {(\%) }}$ |

Source: ASP-NA, 1 (1814-23), 2, 3 (1824-29). The Statement of the Condition of the Navy Pension Fund, February 20, 1829,3: pp. 322-24 is especially
Values were reported to the nearest cent in the annual reports and have been rounded to the nearest dollar amount. Totals may not equal sums because
(a) The rounding. of Washington Bank. The holdings of Union Bank and Washington Bank remain constant over this period. ${ }^{(b)}$ Columbia Bank shares include 626 complete shares.
${ }^{(c)}$ Columbia Bank shares include 826 complete shares.
 of the assets in their reports through 1830. Reported totals have been revised to reflect the failure of the Bank. ${ }^{(f)}$ Of the total, $\$ 34,444$ is invested in Fives and the remainder in Four and OneHalf. It is possible that the additional purchase of Threes is reflected as the face value amount (nominal) instead of the cost, therefore confusing the total with cost-based and maturity values. ${ }^{(g)}$ The total includes a purchase of $\$ 56,499$ of the Washington Corporation.
earlier case, this proved to be a very profitable investment (Studenski and Kroos 1963). The dividends paid by the Second Bank were approximately 6 percent of par value annually. It is reported that the government held its 70,000 shares over the 20 -year life of the bank. Furthermore, the U. S. navy-not the navy's pension fund(!)-is reported as holding 62 shares in 1820, 393 shares in 1822, and 502 shares in July of 1823 (Catterall 1903). Yet the navy pension fund did not acquire any stock in the Second Bank until 1832, when it was ordered by the Secretary of the Treasury to buy only the Second Bank stock for its portfolio.

Table 5.3 reports the asset holdings for the years 1830-35; Table 5.4 provides similar data for 1836-40, although no estimate is given for 1837 because of very limited data. These years show a great deal of shuffling of the portfolio. Some of the reallocation is due to the fact that almost all of the U.S. debt was being redeemed. Between 1829 and 1830, there was a very large increase in the amount of the Threes, Four and Halfs, and Fives being held as the last of the New Sixes were redeemed. In 1829, some municipal stock had been bought in the Washington Corporation, which went under various names during the years in question. In 1832, as the U.S. Threes were being redeemed, the fund, after being directed by Congress to do so, finally made large purchases of stock in the Second Bank of the United States.

Unfortunately, these purchases probably reflected political rather than economic calculations. The fund began purchasing shares in the Second Bank of the United States because it had been directed to do so following several audits. The trustees were also being reviewed for their handling of the Columbia Bank investments. There was considerable correspondence between the trustees and Congress concerning these investments and the request for reimbursement of the fund's losses associated with the bankruptcy of Columbia Bank. (Details of the financial history of the Columbia Bank are provided in Chapter 6.)

By the Act of Congress in July 1832, the fund began acquiring stock in the Second Bank of the United States and according to the annual report of the fund dated November 16, 1832, the total holdings of the stock amounted to $\$ 167,900$. The original trustees had been removed from their jobs, and now the remaining trustee, the Secretary of the Navy, was constrained in the function of managing the portfolio. Examination of the detailed documentation of the annual reports of the fund shows that stock in the Second Bank was purchased directly from the Treasury and at par value. For instance, the annual report of 1833 shows several entries of purchases like that of June 18, 1833: "Paid Secretary of the Treasury for 310 shares of United States Bank stock . . $\$ 31,000$," or at $\$ 100$ per share. But, on the other hand, entries show the fund selling bank shares at a market price that was greater than par: for example, two days later on June 20, 1833, "From the Secretary of the Navy for proceeds of 180 shares of the

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Table 5.3. Estimated Annual Par Value of the Naval Pension Fund, with Holdings by Type of Asset, 1830-35

|  | Year |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets Nominal value | $1830{ }^{(a)}$ | $1831{ }^{(b)}$ | 1832 | 1833 | 1834 | 1835 |
| U.S. stocks |  |  |  |  |  |  |
| Threes | \$133,222 | \$175,666 | \$227,985 | \$149,483 | - | - |
| 4.5 s and Fives | 745,387 | 739,742 | (c) | (c) | - | - |
| Bank of the U.S | - | - | 167,900 ${ }^{\text {(d) }}$ | 256,900 ${ }^{(\mathrm{d})}$ | \$601,300 ${ }^{(\mathrm{d})}$ | \$619,000 ${ }^{(d)}$ |
| State debt |  |  |  |  |  |  |
| Maryland Fives | - | - | 140,221 ${ }^{(\mathrm{e})}$ | 140,221 | 140,221 | 140,221 |
| Pennsylvania Fives | - | - | 212,469 ${ }^{(f)}$ | 212,469 | 212,469 | 212,469 |
| Local debt |  |  |  |  |  |  |
| Washington Fives | 59,472 | 59,472 | 59,472 | 59,472 | 59,472 | 59,472 |
| Cincinnati Fives | - | - | $100,000^{(\mathrm{g})}$ | 100,000 | 100,000 | 100,000 |
| Private stocks |  |  |  |  |  |  |
| Union Bank | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| Washington Bank | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Total value | 1,059,773 | 1,003,880 | 937,047 | 947,565 | 1,142,462 | 1,160,262 |

Source: ASP-NA, 3(1830), 4 (1831-35).
Values were reported to the nearest cent, but have been rounded to the nearest dollar. Totals may not equal sums because of rounding.
${ }^{(a)}$ The values of Threes and the other U.S. debt were calculated from the total U.S. stocks listed by the Naval Pension Fund from an aggregate, using data from 1829 and detail from redemptions and purchases.
${ }^{\text {(b) }}$ Estimates prior to 1836 were based, so far as possible, on the cost basis of acquiring the assets. During the latter period the reporting was based on nominal or par value of the stocks, and that reporting was in transition at the end of the data. For 1830, the prices paid by the fund for the stocks included in the portfolio were: total U.S. stocks $\$ 804,260$ relative to the nominal amount of $\$ 915,408$-bought at an average discount; the City of Washington stock (called variously the Washington Corporation and Washington 5 Percent Lottery) was acquired for $\$ 56$, 499; with the bank stock of Columbia $\$ 99,503$ bought at an average premium, Union $\$ 15,340$, and Washington $\$ 14,260$-both of which bought at an average premium. Over this period, the annual reports were made between the dates of September 30 and December 31, and end-of-year represents the date of the report.
${ }^{(c)}$ The Threes and Fives were reported only in the aggregate. It should be assumed that the majority of the debt is in the Threes, since the Fives were being redeemed.
${ }^{(d)}$ The shares of the Bank of the U.S. appear to have been purchased directly from the Treasury at a par value of $\$ 100$ per share. However, this doesn't match perfectly with the Annual Reports of the Fund in terms of the number of shares bought and sold.
${ }^{(e)}$ The Maryland Five bonds were purchased over time at an average price of $\$ 109.03$, for a current yield of 4.59 percent.
${ }^{(\mathrm{f})}$ The Pennsylvania Five bonds were purchased at an average price of $\$ 114.60$, for a current yield of 4.36 percent.

Bank of the United States sold . . . $\$ 20,468.70$," which is $\$ 113.715$ per share. These entries continue on through 1834, but with the sales, the fund reports the gross receipts without reporting the number of shares sold, making it impossible to determine from their accounting whether the sales were "profitable" to the fund. However, market prices of this stock are available for the New York and Philadelphia markets for 1833 and 1834, showing the Bank stock remaining 10 percent to 25 percent above par through 1838 (Sylla et al. 1997). Such a situation for the fund represented another government subsidy; however, it cannot be ascertained whether or not it was an intentional action by the Congress. By the end of 1835, the fund's holdings in the Second Bank totaled $\$ 619,100$ of the total value of the fund of $\$ 1,160,262$, or 53.36 percent. Nevertheless, the source of some of the funds used in the purchase of stock in the Second Bank had come from another act of Congress. This legislation provided reimbursement for loss of principal and foregone dividends from the Columbia Bank due to its demise. An entry in the annual report of the fund for 1834 includes the item on July 24, "From the Treasurer of the United States, for Columbia Bank stock, purchased of the navy pension fund by the United States per act of Congress, approved $30^{\text {th }}$ June, $1834 \ldots \$ 167,164.40$."

Interestingly, by the end of 1835, the Second Bank of the United States had ceased to exist as part of the government. The battle over the bill to renew the charter of the Second Bank of the United States became known as the "bank war" (Schlesinger 1945; Hammond 1957; Temin 1969). The Democratic antagonism toward the national bank dated from the early days of Jefferson's leadership of the party. Andrew Jackson's verbal assaults on the bank were, as we have seen, even more vituperative than his predecessor's. They did not call him Old Hickory without reason; his actions lived up to his words. When the pro-bank Whigs attempted to make the election of 1832 a referendum on the national bank by passing a recharter act four years before the Second Bank's charter actually expired, Jackson called their bluff and vetoed the bill. His subsequent landslide victory effectively ended national banking in the United States for more than a generation and eliminated an institution that could serve as a central bank for nearly 80 years.

The Second Bank closed as a government entity as of March 3, 1835. As with the First Bank of the United States, the original 20-year charter of the Second Bank expired without being renewed by Congress because of Jackson's veto. Due to these events, the navy pension fund again began to acquire private bank equity after being directed to do so by the government. The bank reverted to a private bank, chartered in Pennsylvania. The new bank was called the Bank of the United States of Philadelphia and continued to operate without closing the books of the U.S. Bank. The change in status led to a dispute about reimbursement to the government for the remaining shares of the original bank. It was finally agreed that the government would
Table 5.4. Estimated Annual Par Value of the Naval Pension Fund, with Holdings by Type of Asset, 1836-40

| Assets | Nominal value | Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1836 | 1837 | 1838 | 1839 | 1840 |
| U.S. stocks |  |  |  |  |  |  |
|  | Bank of the U. S. | \$641,600 | \$641,600 | - | - | - |
| State debt |  |  |  |  |  |  |
|  | Maryland Fives | 101,097 | - | - | - | - |
|  | Pennsylvania Fives | 212,469 | 97,469 | \$ 97,469 | - | - |
|  | Illinois Sixes | - | $100,000^{\text {(a) }}$ | 100,000 | \$ 70,000 | - |
| Local debt |  |  |  |  |  |  |
|  | Washington Fives | 59,472 | 59,472 | 59,472 | 57,739 | \$ 33,389 |
|  | Cincinnati Fives | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
|  | Washington Sixes | - | 6,691 ${ }^{\text {(b) }}$ | 6,691 | - | - |
| Private stocks |  |  |  |  |  |  |
|  | Union Bank | 15,000 | 15,000 | 13,200 | 11,400 | 11,400 |
|  | Washington Bank | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Total value |  | 1,143,639 | 1,049,232 | 390,832 | 253,139 | 158,739 |

Source: Annual Reports of the U.S. Secretary of the Navy in documents of the U.S. House of Representatives and reports from the U.S. Senate. Values were reported to the nearest cent, but have been rounded to the nearest dollar. Totals might not equal sums because of rounding. ${ }^{(a)}$ The Illinois Sixes were purchased at a price of $\$ 106.00$, for a current yield of 5.66 percent.
${ }^{(b)}$ The price paid for the Washington Sixes cannot be ascertained.
be reimbursed at a price of $\$ 114.14$ per share to be paid in equal installments (plus 6 percent interest per year) over the four years 1837-40. Meanwhile, the Second Bank of the United States of Philadelphia was going bankrupt. The price of its stock first fell below par in October 1839, when the price of a share fell to $\$ 67.00$ in New York from a closing price in September of $\$ 103.125$. By the end of 1842 , the stock was selling for $\$ 1.50$ per share.

The history of this bank after 1838 is essentially irrelevant to the navy pension fund, which, as we saw in the previous chapter, had steadily been liquidating the stock to meet pension payments. The annual reports show that the fund held no stock in the Second Bank as of September 30, 1838. As the Second Bank of the U.S. of Philadelphia was nearing bankruptcy, the navy pension fund was approaching bankruptcy itself due to excessive back payment claims and the problems of meeting pension demands, as described in Chapter 4.

Before the purchases of stock in the Second Bank of the United States, the fund acquired the state debt of Maryland and of Pennsylvania, beginning in 1832, along with the local debt of Cincinnati, also purchased in 1832. Each of these assets paid a 5 percent coupon rate. As described in the footnotes to the tables, these stocks were bought at a premium. Indeed, practically all government debt ever acquired by the fund was purchased at a premium, except for the early Deferred Sixes and the Threes, which typically traded at a discount because of their "less than market" coupon. In 1837, a large quantity of Illinois bonds and a small additional amount of local debt in Washington were added to the fund's portfolio. These purchases were made at the same time that the charter of the Second Bank of the United States was being terminated. Over the period 1830-36, the total amount of the portfolio remained rather constant at roughly $\$ 1$ million, but fell sharply in 1838 to $\$ 390,832$, as stocks had to be sold in order to meet the increased pension obligations of the fund (see Chapter 4).

The total amount of the portfolio at the end of 1839 was $\$ 253,139$ with the par value of the Cincinnati and Washington municipal stock listed as $\$ 100,000$ and $\$ 57,739$. Shares of the Union and Washington Bank were listed as $\$ 11,400$ and $\$ 14,000$ and Illinois state bonds had a recorded value of $\$ 70,000$. The 1840 annual report listed the total portfolio as $\$ 148,739$ with the same amounts of bank stock as 1839 and the bonds of Cincinnati at $\$ 100,000$. The Washington stock was pared down to $\$ 33,339$.

In the Annual Report of the Secretary of the Navy dated November 20, 1841, the condition of the fund is described by Commissioner of Pensions, J. L. Edwards. The report shows that the obligations of the fund far exceeded the sum of anticipated income and capital. Edwards stated:

The only stocks which now remain of the navy pension fund are 700 shares of the Bank of Washington, the nominal amount of which is $\$ 14,000$, and stock of the

Union Bank of Georgetown, the nominal amount of which is $\$ 9,600$. The latter institution is closing its concerns, and, as soon as collections can be made, the directors will pay from the dividends of its capital stock the amount due to the navy pension fund. The stock of the Bank of Washington cannot now be sold at advantage, and the amount of interest which it yields is so inconsiderable that I have not introduced it into the present report as available. (U.S. Senate 1841)

Shortly after this report was submitted, the fund was formally liquidated, and Congress began paying navy pensions from the general fund of the treasury.

## Problems with the Administration of the Pension Fund

The basic organizational flaw with the navy pension fund was the division of responsibilities in the determination of plan characteristics. These included eligibility for benefits, the generosity of annual benefits, and the flow of new monies into the fund from the sale of prizes. This situation left the managers of the portfolio somewhat vulnerable to the temptation to maximize returns from their investments in order to provide the revenues needed to meet the fund's increasing liabilities.

The commissioners of the navy pension fund from the fund's beginning in 1800 through 1832 included the Secretaries of the Navy, the War Department, and the Treasury. From 1832, the fund was under the sole control of the Secretary of the Navy, who, of course, was appointed by the president. By the Act of 1832, the Secretary of the Treasury gained greater control over the assets that could be purchased. It is clear that political issues during the early years of the republic played a prominent role in the portfolio decisions of the fund and were of special importance regarding the U.S. debt and the federal banks. Table 5.5 contains the names and dates of the secretaries for the periods of their responsibilities for overseeing the fund; Table 5.6 lists some of the Boards of Directors of the Columbia Bank for the period. A brief summary shows that the mean average term for any trustee was about 3.5 years, and the number of years when there was exact overlap of members was much shorter.

With the possible exception of the Secretary of the Treasury, very few of the participants as "commissioners" had any practical experience with matters of portfolio management. These political appointees were not equally competent at their jobs. Catterall (1903) provides an assessment of two treasury secretaries following Albert Gallatin's resignation of the post: "Thereupon William Jones, Secretary of the Navy, became Secretary of the Treasury, and in his person helpless inefficiency was placed in control of the government finances. Surrendering the post in February, 1814, he was succeeded by the equally inefficient George W. Campbell." There is no doubt that others could be added; yet there are counter examples, like Gallatin and Alexander Dallas. Little detail about the internal organization of the
staff of the pension fund exists. However, it appears that the agents must have been playing a major role, while the commissioners were simply ratifying the activities of the staff. The sporadic reports of various auditors of the fund suggest that the routine operations of the portfolio's management did not have much effective oversight.

With the benefit of hindsight, the two greatest errors of commission were the rather large investment in Columbia Bank (and D.C. banks in general)

Table 5.5. Commissioners of the Navy Pension Fund, 1800-1842

| Secretaries of the Navy, 1800-1842 |  |
| :--- | ---: |
| Benjamin Stoddert | $1798-1801$ |
| Robert Smith | $1801-1809$ |
| Paul Hamilton | $1809-1813$ |
| William Jones | $1813-1814$ |
| Benjamin Crowinshield | $1814-1818$ |
| Thompson Smith | $1818-1823$ |
| Samuel L. Southard | $1823-1829$ |
| John Branch | $1829-1831$ |
| Levi Woodbury | $1831-1834$ |
| Mahlon Dickerson | $1834-1838$ |
| James K. Paulding | $1838-1841$ |
| George E. Badger | 1841 |
| Able P. Upshur | $1841-1843$ |
| Secretaries of War, 1800-1832 |  |
| Samuel Dexter | $1800-1801$ |
| Henry Dearborn | $1801-1809$ |
| William Eustis | $1809-1813$ |
| John Armstrong | $1813-1814$ |
| James Monroe | $1814-1815$ |
| William H. Crawford | $1815-1817$ |
| John C. Calhoun | $1817-1825$ |
| James Barbour | $1825-1828$ |
| Peter B. Porter | $1828-1829$ |
| John H. Eaton | $1829-1831$ |
| Lewis Cass | $1831-1837$ |
| Secretaries of the Treasury, $1800-1832$ |  |
| Oliver Wolcott | $1795-1801$ |
| Albert Gallatin | $1801-1813$ |
| William Jones | 1813 |
| George W. Campbell | $1813-1814$ |
| Alexander J. Dallas | $1814-1816$ |
| William H. Crawford | $1816-1825$ |
| Richard Rush | $1825-1829$ |
| Samuel Ingham | $1829-1831$ |
| Louis McLane | $1831-1833$ |
| Tr Act |  |

The Act for the Better Government of the Navy on the United States in 1800 stated that the Commissioners of the navy pension fund would be the Secretaries of the Navy, War, and Treasury. This organizational structure lasted until 1832, when it was decided to simplify the decision making and place the responsibility solely in the hands of the Secretary of the Navy.
and the position taken to invest in the Second Bank of the United States in 1835-36 after the bid to recharter the bank failed. The two greatest errors of omission in managing the portfolio were the failure to buy stock in the First Bank of the United States in 1800 or thereafter and the failure to purchase stock in the Second Bank of the United States when it was initially offered in 1816.

The logical explanation for the fund's purchases of locally traded stock in Washington banks instead of the U.S. Bank stocks is that politics were involved. President Thomas Jefferson was a strong opponent of the First Bank, and his allies ultimately mustered the political forces to prevent the rechartering of the bank during the Madison administration in 1811. Similarly, President Andrew Jackson was opposed to the Second Bank, and most other banks for that matter, and assembled enough support to prevent its recharter in 1835. Jackson had vetoed the recharter bill in 1832, which his Whig opponents had pushed through Congress during the election campaign of that year. One can imagine the difficulty the trustees would have had in buying stock in a bank that was strongly criticized by the president who appointed them. There is no remaining evidence in official records that the trustees explicitly discussed political considerations. Thus, it is only spec-ulation-an educated guess, perhaps-that the decisions not to purchase shares of the federal banks from 1800 through 1832 had political roots.

The Democratic faction's opposition to banks is well documented. In general, agrarians distrusted banks, and they particularly objected to the idea of financial power concentrated in a federal or national bank modeled after the Bank of England. Many early Democrats (or Republicans, as they were sometimes confusingly called) thought that the national banks existed only to consolidate financial power in the hands of the federal government, taking regular business away from private commercial banks and diminishing state autonomy. Another major argument against the Second Bank was that so many shares were owned by foreigners; in fact, it was facetiously referred to as a "British" bank, which played a large part in the failure to recharter the Bank (Hammond 1957). This experience may provide some guidance to those who are recommending that the assets of the Social Security fund in the twenty-first century be invested in equities. If history is a guide, then political considerations may well dominate the portfolio selection.

Another shortcoming in the management of the fund seems to be its failure to reinvest surplus revenues in a timely manner. Whether this apparent oversight resulted from misfeasance or nonfeasance is difficult to ascertain from the records that survive, but in either case this shortcoming was apparent from the beginning of the fund. Two of the earliest assets in the pension portfolio required quarterly maintenance in reinvestment. The constant turnover in these assets required a keen accounting of reimbursement versus net revenue flows. The original Sixes and Deferreds paid interest
quarterly, the Sixes from their inception in 1791 and the Deferreds after a period of ten years (hence the name "deferreds"). They then paid quarterly interest of $\$ 1.50$ like the Sixes. By the time the fund began operations, having acquired the Sixes in 1800 and the Deferreds in 1801, these instruments had been converted to 8 percent annuities.

At the time the original debt was issued, Hamilton established a sinking fund to buy these bonds back on the open market at the rate of 2 percent per annum. Holding the assets in an account receiving the interest from the repurchased bonds and making the 2 percent redemption compounded quarterly would have enabled the U.S. government to retire the debt in 23.8 years. However, the open market purchase plan soon fell behind schedule, and Congress subsequently legislated a mechanized plan in which the bonds were converted into annuities. The Sixes and Deferreds under this plan would be fully redeemed by 1818 and 1824, respectively. The basic idea

Table 5.6. Directors of Columbia Bank, 1793-1824
Board of Directors, 1794

James Lingan
Marsham Waring
Uriah Forrest William Marbury
Thomas Law
Francis Deakins
Board of Directors, 1809
Charles Worthington
William Marbury
John Cox
John Threlkeid
Walter Smith
Washington Bowie
Board of Directors, 1826
Richard T. Lowndes
Samuel Ridout
George H. Stewart
Thomas G. Pratt
John Litle
Francis S. Key

James Dunlop John Templeton John Laird Robert Frost Charles Lowndes John Mason

Henry Foxhall
Marsham Waring
James Dunlop
Philip B. Key
Jeremiah Williams
Thomas Peter

Columbia Bank was founded in 1793, with the two principal backers becoming the first and second presidents of the bank, Samuel Blodget (1793) and Benjamin Stoddert (1794-1798). The third president, John Mason (1798-1816), was followed by Nathaniel Frye (1826-1828) and Richard Lowndes (1828-1837). Members of the Board of Directors of the bank are available from Walsh (1940) for selected dates; members for 1794,1809 , and 1826 are provided. Three directors continued from the 1794 to the 1809 board: William Marbury, Marsham Waring, and James Dunlop. None of the directors in 1826 had continued from 1809, but two surnames continued from the snapshots from past boards, Key from 1809 and Lowndes from 1794. Columbia Bank was essentially defunct as of 1824 , but it appears that the administration continued until at least 1837.
was as follows: For each $\$ 100$ par value the quarterly payments would be $\$ 1.50$ in each of the first three quarters and $\$ 3.50$ in the last quarter. This payment of $\$ 8.00$ included an investment return of $\$ 6.00$ ( 6 percent on the $\$ 100$ bond) and a $\$ 2.00$ redemption in the value of the bond.

The next year, the bond had a principal value of $\$ 98.00$. The same schedule of payments was then applied. However, each of the $\$ 1.50$ quarterly payments represented a partial percentage redemption of principal. In addition, the final quarter's payment of $\$ 3.50$ further reduced the remaining value of the bond. The determination in each quarter of the amount of the coupon payment representing "income" and the amount representing "redemption" is a complex matter, because each quarter the "income" portion declines and the "redemption" portion increases. After ten years of such repayments ( 1805 for the Sixes and 1811 for the Deferreds), the $\$ 8.00$ annual flows on these instruments represented $\$ 3.57442051$ of "redemption" and $\$ 4.42557949$ of "income" on the remaining principal of the bond. This compared to the original $\$ 2.00$ and $\$ 6.00$ respective amounts in the initial year (Sylla and Wilson 1999). To appropriately value holdings of the fund and its net income, redemptions needed to be separated from the interest payments. The redemptions were actually sales of assets, and these funds should have been reinvested to maintain the financial position of the fund. The trustees did not or were not able to make this distinction in their cash flow. As a result, both redemptions and interest payments were reported as income and the decline in asset value went unrecognized.

In fact, it is doubtful the managers of the fund paid much attention to dividend or coupon bond income. An audit of the transactions of the pension fund found that the fund had no record of any dividends received from Columbia Bank, Washington Bank, or Union Bank for the years 1816, 1823, and 1824, and from Washington and Union Banks for 1828. In addition to missing these bank dividend flows entirely, the audit report criticized the trustees for their failure to reinvest excess cash balances in income producing assets.

In one instance regarding prompt investment of idle balances, Congress had directed the navy pension fund to respond to several specific inquiries in 1829 (ASP-NA, 2). Congress asked the Secretary of the Navy, Samuel Southard, to account for the 1828 annual report, where "it appears that more than $\$ 250,000$ lay uninvested for six months, . . . without any explanation of the cause, or in whose hands the money lay idle. In no one of these statements can we find what premium or commission was paid on the purchases of any of these stocks." During this same inquiry, Congress was trying to obtain from the Navy the amount and cause of a loss ranging from a minimum estimate of $\$ 142,899.58$ to a maximum estimate of $\$ 293,823.50$ (ASP-NA, 2). The accounts were in such bad shape that it seems impossible that the fund could have been managed in an efficient manner.

Part of this actual or perceived loss might have been associated with the failure of Columbia Bank, which was still carried on the pension fund's
annual reports as an asset through 1829. When Columbia Bank failed in 1824, the secretary of the navy initiated a series of appeals to the Treasury and Congress to reimburse the fund for its loss in order to honor the fund's commitments to pensioners, widows, and orphans by continuing their pensions. In response, in 1829, the House of Representatives directed Secretary Southard to provide a complete accounting of the fund in terms of losses, operation costs, monies received from prizes, and so forth annually from 1814 through 1828.

The Navy's response to this directive reveals much information that was not available from the original annual reports (ASP-NA, 2). There ensued a series of correspondence between the Secretary of the Navy and the House of Representatives that revealed that the navy pension fund had not done a very good job in managing its portfolio. Among these items of neglect was the failure of the fund to receive the bank dividends for several of the years covered in the accounting. The details of these managerial shortcomings are provided in the appendix to this chapter. In summary, the criticisms dealt with an attempt to recover the dividends, amounting to at least $\$ 3,700$. This was not a trivial sum. At the time, it was equal to the monthly pension of $\$ 5$ for over 60 seamen for one year without considering forgone returns that these monies would have earned. In one case, uncollected dividends extended back for over a decade. Separately, all of the forgone dividends to the fund had been paid to "late" agents of the fund, but the agents had not credited the monies back to the fund's portfolio. The failure to credit the missing dividends suggests outright malfeasance.

Another item of concern was the custom, in operation since 1800, of paying commissions to the agent who acquired an asset for the fund. The typical charges were 0.25 percent and in some cases 0.5 percent. For example, George Macdaniel received a commission of 0.5 percent of the dollar value of his purchases of Columbia Bank stock. These commissions were similar to those being charged by brokers in New York (Werner and Smith 1991).

Macdaniel's account for that period also listed his receipt of a half-year's dividends from Columbia Bank on 283 full shares and 343 short shares totaling $\$ 1,680.80$. Also in Macdaniel's hands were balances from paying pensioners and from an account to buy stocks. With this account was a note from Thomas Turner, of the Navy Accountant's Office, to Macdaniel: "The Treasurer of the United States will be pleased to receive of George Macdaniel the above two thousand and eleven dollars thirty-seven cents, and pass it to the credit of the Navy Pension Fund." This note suggests that the agent's own dealing in stock transactions was intertwined with pension disbursement payments and commissions for making purchases of stocks and that the dividends of Columbia Bank stock were being made to the agent instead of directly to the treasury or the fund.

There were also some cases when the commission charged was higher than that reported above. In 1829, the agent Charles Hay was paid a
commission of $\$ 3,376$ for the purchase of $\$ 675,264.89$ of stock, which included $\$ 150,000$ of U.S. Four and One-Halfs at par. Hay charged a commission of 0.5 percent, which seemed to Congress to be excessive. It was also pointed out that the agents George Macdaniel and Benjamin Homans had charged up to one percent on some of their asset purchases. This rate was excessive by the standards of the market at that time. John Boyle, who had served as the manager of the navy privateer pension fund, had never charged a commission over the period of his transfers from 1819 to 1829. Recognizing something was amiss, Congress relieved the navy pension fund of these commission charges as of 1829 (ASP-NA, 2).

In summary, problems in the operation of the pension fund included poor and inadequate accounting methods even by the standards of the day, relatively high commissions paid to agents for purchases of assets, failure to have dividends transferred to the fund in a timely manner, difficulties in receiving monies from the sale of seized vessels, trading from their own accounts by agents of the fund, slow reinvestment of cash received, and the choice of stocks purchased by the fund. With respect to the receipt of prize monies, in the report to Congress for 1815, the trustees wrote:

In performing this duty, the commissioners find it necessary to claim the further aid of the Legislature, not only to enable them to collect the arrearages of the prize money, which belongs to the fund, but to secure, in future, a punctual and faithful accountability on the part of those officers who are charged with the prosecution and sale of prizes, and the collection and distribution of the proceeds of the sales. The imperfections of the existing laws are great, and have given rise to many abuses. (ASP-NA, 1, no. 134).

The organization of the fund's administration was political, with the commissioners being presidential appointees, and there seemed to be no efficient operational substructure to take care of day-to-day business. The accounts of the fund were not well managed even by the standards of the day. These administrative problems illustrate the problems of managing a public pension fund in the nineteenth century. Readers should consider which if any of these problems are likely to recur if funds from the Social Security trust fund were to be invested in publicly traded assets.

## Summary and Conclusions

The U. S. navy pension fund represents the first attempt in the United States of handling a portfolio of securities to pay pensions to qualified beneficiaries. Receipts into the fund were based on the value of prizes taken by navy vessels. The prizes were liquidated, and after expenses were paid, the cash was distributed to the officers and seamen who seized the prize. In addition, a share of the prize went into the pension fund. These receipts were placed in a portfolio that earned returns sufficient to pay benefits to
qualified disabled seamen and their dependents without any dependence on tax revenues from the populace. The plan seemed idealistic for its day. Yet it was fraught with an inherent moral hazard. The fund, should it accumulate surpluses, had flexibility, but if revenues were insufficient to meet the fund's pension obligations, the pension system had in reserve the "full faith and credit" of the government in making up any shortfalls that might accrue. This chapter tells a rather complex story, partially because most of the participants, as actors and agents, either did not always understand exactly what they were doing or they understood all too well and took advantage of the primitive accounting standards and financial oversight of the day. There were few precedents as to how pension funds should work in an actuarial sense, and in terms of portfolio management techniques, there were no guidelines.

As long as the fund was receiving income and prize monies that exceeded the outlays to eligible pensioners, the fund was autonomous and retained any surpluses. But when the fund's investments lost their value, or when Congress increased pension benefits beyond the ability of the fund to honor the commitment, the U.S. Treasury was obliged to bail the fund out of its predicament. Ultimately, the federal treasury-that is, taxpayers- bore the risk of potential failure, for whatever reason, of the navy pension fund to meet its pension obligations.

A conflict resulted from the fact that, though the Commissioners of the fund made decisions about portfolio management, decisions concerning eligibility for pensions and the amount awarded were the responsibility of Congress, though the commissioners usually provided input concerning proposed increases in pension coverage. However, their recommendations did not prevent Congress from revising statutes to expand coverage and increase the generosity of benefits. Examples of such congressional actions that were opposed by the trustees include extending benefits to widows and orphans and the passage of the "arrears act" that paid pensions from the time of the occurrence of the disability.

The internal management of the navy pension fund did not enhance the probability of success in maximizing returns from the investments. The commissioners of the fund, including the Secretaries of the Navy, War, and Treasury until 1832, did not seem to treat their duties in this respect as a high priority. The operations of handling the transactions of the fund seemed to fall to their staffs, such as they were, with the pension agents apparently playing a key role in managing the revenues and investment decisions of the fund. There is evidence that income was not promptly reinvested in order to maximize portfolio returns, and some income received from investments never reached the fund. The agents, though essentially salaried employees of the fund paid to disburse pension payments, charged commissions for their services of buying securities for the fund. Normal commissions on stock transactions for brokers was 0.25 percent, but on
many stock and bond purchases the agents charged from 0.50 percent to 1.00 percent. In addition, it seems that the purchases were made in the names of the agents, to which income payments from the stock were directed, and the agents were often negligent in remitting these dividends to the fund. At best they were trading on their own accounts; at worst they were embezzling from the fund.

Overall, the evidence indicates that the internal operations of the fund were not well managed by the trustees and that these errors resulted in reduced rates of return to the fund. The next chapter contains a review of the investment choices made by the trustees. The choices indicate several prominent errors in judgment associated with missed opportunities for investments with relative high returns while the fund was purchasing rather risky shares in local banks that ultimately defaulted on dividend payments altogether. Eventually the values of the shares collapsed as the banks went bankrupt. Ultimately, the fund itself collapsed as well.

## Appendix

## A Brief Description of the Assets Held by the Navy Pension Fund

The fund began its portfolio with U.S. government debt instruments, and the majority of the holdings were in those various assets so long as they were available. In 1809 the fund added private bank stock to the portfolio, some of which was held for the complete period ending in 1842. Interestingly, the fund never held any stock in the First Bank of the United States, which ceased operation in 1811 when the charter was not renewed. In 1830, as U.S. government bonds became relatively scarce due to the almost complete elimination of the federal debt, the fund began adding municipal and state bonds to the portfolio. In 1832 the fund added stock in the Second Bank of the United States to the portfolio and was directed to buy only this asset in the future.

The period 1800 through 1842 provides some relatively easy times for managing portfolios, but toward the end of the fund things became extremely difficult. The federal debt was essentially retired between 1834 and 1836 and could play no major role as a dominant asset in a portfolio. Private bank stock became depressed during the 1830s (Smith 1953). The Second Bank of the United States was not rechartered, and between 1839 and 1842 the price of the stock fell from a premium to virtually nothing (Smith 1953). In 1841 several states either fully or partially repudiated their debt or defaulted (English 1996; Sylla and Wallis 1998). During the later period, when the burden of payments to pensioners was increasing, investment opportunities for managing the fund to generate income were nil.

What follows is a very brief description of the assets held by the fund, chronologically as they were issued or included in the portfolio of the
fund. A significant omission in the fund's portfolio included the First and Second Bank of the United States (prior to 1832, at least), which we include in our descriptions. Names of assets below are as described by Bayley (1882), Elliott (1845), and/or Homer and Sylla (1996). Whereas current identification of a Treasury security is by coupon and maturity date, in earlier times identification was by coupon and issue date, since the maturity date was usually vague, like "redeemable at the pleasure of the government." For U.S. bonds, the dates of issue, size of the issue, date of redemption, and variations are briefly explained.

The Sixes, Deferreds, and Threes were issued between 1791 and 1794 based on the plan of Alexander Hamilton for the original funding of the debt incurred during the American Revolution. These bonds had no even par value because they were based on claims against the government that ranged from a few dollars and cents to some very large sums. Otherwise, U.S. bonds were generally issued in terms of $\$ 100$ par. Due to the odd amounts of these early issues, market quotations were not in terms of the price of a bond in dollars, but as percent of par.

Sixes (Sixes of 1790, or Original Sixes), $\$ 30.0$ million, redeemable at the pleasure of the government, interest of 6 percent payable quarterly, converted in 1796 to 8 percent annuities for purposes of retirement of 2 percent per annum, compound, and completely redeemed in 1818.

Deferreds (Deferred Sixes of 1790), $\$ 14.6$ million, similar in all respects to the Sixes, except that interest payments were not begun until January 1801, converted to 8 percent annuities in 1802, redeemable on the same schedule as the Sixes and fully redeemed in 1824.

Threes (Threes of 1790), $\$ 19.7$ million, redeemable at the pleasure of the government, interest payable quarterly, at times purchased by the Treasury in the open market by the sinking fund, but not fully redeemed until 1832 .

Stock of the First Bank of the United States was a nationally traded security, along with the U.S. debt instruments. The bank was chartered in 1791 with a $\$ 400$ per share par value, with 25,000 shares for a stockholder par value of $\$ 10$ million, and was in existence until the charter was not renewed in 1811. This was an actively traded stock, paying semiannual dividends in January and July. Dividends were between 8 and 10 percent of par value for all years except 1793, with an annual dividend rate of 7.625 percent, and 1794 , with a rate of 7.875 percent. Stockholders in the bank were fully reimbursed at the time of nonrenewal of the charter. Stephen Girard, who had invested heavily in the bank, bought out the entire concern, changed the name to Girard's Bank, and continued the concern as a private bank until his death in 1831.

Nary Sixes were issued in 1799 to purchase naval vessels, in the amount of $\$ 711.7$ thousand, with interest payable quarterly at an annual rate of 6 percent, redeemable at the pleasure of the government, but fully redeemed in 1806.

Exchanged Sixes were the result of a voluntary refunding in 1807 and 1808 allowing Sixes or Deferreds to be exchanged into a 6 percent bond that was fully redeemed in 1824, but not subject to the redemption schedule of the converted 8 percent annuities. Approximately $\$ 6$ million was exchanged from Sixes and Deferreds into Exchanged Sixes.

Eights were made up of two issues, one in 1798 redeemable in 1809 of $\$ 5.0$ million, the other in 1800 redeemable in 1809 of $\$ 1.5$ million. The annual interest rate of 8 percent was paid in quarterly installments. Redemption dates are the date of actual redemption. Actually the conditions of the bond were that interest would cease in 1809, though the bond could remain unredeemed without interest. In fact, the bonds were redeemed in 1809.

Converted Sixes were the result of the same refunding of 1807 and 1808 of Threes being converted to Sixes, which were quickly redeemed. Only about $\$ 2$ million was converted.

Louisiana Sixes were for the purpose of the Louisiana Purchase, issued in 1805-6 in the amount of $\$ 11.5$ and fully redeemed in 1818-19.

Common stock in the commercial banks of Columbia Bank, Union Bank, and Washington Bank began to be acquired in 1809, coincident with the redemption of the Eights. Additional purchases of bank stock were made in 1819, coincident with the redemption of the Louisiana Sixes. These banks were Washington, D.C. banks and were not nationally traded.

New Sixes constituted the 6 percent coupon bonds, with quarterly interest payments, issued during the War of 1812. These issues were made up of a series of bonds over the period 1812 through 1820. The Sixes of 1812 was a loan of $\$ 8.1$ million, redeemed in 1824. The Sixes of 1813 amounted to $\$ 18.1$ million, redeemed in 1825-27. The Sixes of 1813-14 were in the amount of $\$ 8.5$ million, redeemed in 1825-27. The Sixes of 1814 totaled $\$ 15.4$ million, redeemed in 1827-28. Sixes of 1815 were in the amount of $\$ 12.3$ million, redeemed in 1828 . The Sixes of 1820 amounted to $\$ 2.0$ million, redeemed in 1821.

Four and One Halfs and Fives combine several issues. The Fours of 1820, amounting to $\$ 1.0$ million, were redeemed in 1830 , the Fives of 1821 , of $\$ 4.7$ million, and the Four and One Halfs of 1824, $\$ 14.5$ million, were redeemed in 1834. In 1831, as these bonds were being redeemed and
the Threes were scheduled for redemption in a couple of years, the fund began to acquire state and municipal bonds, and was soon to be directed to acquire only stock in the Second Bank of the United States. The first venture of the fund into state and municipal bonds was in local, as opposed to nationally traded, assets. Later acquisitions were in bonds that were being traded nationally.

Washington Fives were originally called City of Washington Stock and changed names several times over the holding period. These bonds were acquired in 1830, and in 1832 the fund acquired Cincinnati Fives.

Maryland Fives and Pennsylvania Fives were also bought in 1832, with Illinois Sixes added in 1837. All three states defaulted temporarily on their debt: Maryland in January 1842 with resumption in January 1848; Illinois also in January 1842 with resumption in July 1846; Pennsylvania in August 1842 with resumption in February 1845. The fund had liquidated its position in all these bonds prior to their temporary default.

Stock in the Second Bank of the United States was acquired in 1832 under the direction of the Secretary of the Treasury, and the Secretary of the Navy restricted additional purchases by the fund to being only in this instrument. The stock had been issued in 1817 at $\$ 100$ par value per share, 350,000 shares, for a total capitalization of $\$ 35$ million. These shares were traded actively in American markets and were especially popular with European investors. The stock paid semi-annual dividends in January and December. The dividends were less than those paid by the First Bank, beginning at about 3.5 percent and increasing to 7.0 percent of par value toward the end of the charter in 1816. The fund had not included the stock in its portfolio, and did so only when directed by the Congress. The Second Bank was not rechartered in 1836 and failed in 1841. Those holding the stock at the end of the charter were not, so far as we can determine, ever reimbursed for the loss. Holdings by the U.S. Government, which had originally been 20 percent of the shares outstanding, at the end of the charter were finally reimbursed, but only after several years of negotiation and a schedule of annual payments from the private version of the bank, which was called the Bank of the United States of Pennsylvania.

Civil War U.S. Securities (see Chapter 7):
Sixes of 1881 were issued in two phases, $\$ 18.4$ million in February 1861 and $\$ 50$ million in July 1861 redeemable in 1881.
$6 \% 5-20$ s of 1862 were issued in 1862 in an amount of $\$ 23.7$ million, with additional amounts of $\$ 491$ million in 1863 and 1864. These were
redeemable in five years and due in 20 years. In 1865 there was an issue of $\$ 125$ million of $6 \% 5-20$ s of 1864 redeemable in 1869 and due in 1884, which were sold at 102.50 for a yield of 5.42 percent. In 1865-66, $\$ 203$ million of $6 \% 5-20$ s of 1865 were sold at the same price and yield, redeemable in 1870 and due in 1885. All these bonds paid coupons on a semi-annual basis and were tax-exempt.

Consol Sixes were issued over the period 1867-69 with three different redeemable and due dates: $\$ 333$ million redeemable in 1870 and due in 1885 , $\$ 379$ million redeemable in 1872 and due in 1887, and $\$ 72$ million redeemable in 1873 and due in 1888. All three issues were sold initially at a premium with yields to redemption, respectively, of $5.16,5.6$, and 5.87 percent.

## Evidence of Inefficient Management of the Navy Pension Fund

Following a long investigation by the government, and in their report of the details from bank records, they reported their evidence. In their report they presented tables of dividends received from Columbia, Union, and Washington Banks for each year, 1814-28, with dividend amounts missing entirely for all three banks for the years 1816, 1822, and 1823, and missing from Union and Washington Banks for 1828. Their report of irregularities is quoted here from ASP-NA, 2, no. 393, pp. 530-31.

The dividends on bank stocks which accrued in 1816 were received in that year by the late agent (B. Homans, deceased), but were not paid over until $26^{\text {th }}$ June, 1817. Those due for the Union Bank stock, $1^{\text {st }}$ April, 1823, $\$ 375.00$, and for Washington Bank stock, $30^{\text {th }}$ April, 1823, $\$ 420$, were received by the same agent, but not paid over. They are charged to his account. In January, 1825, his son, B. Homans, paid $\$ 200$; the balance (except $\$ 18.23$ credited for salary) still remains due.

In 1825 , Charles Hay, his successor, paid $\$ 1,590.00$, which was received by him in June, 1824, for Union and Washington Bank dividends.

In 1826 Charles Hay received $\$ 1,590.00$ of dividends from the same banks, which he failed to pay over. It is charged to his account, on which there is a balance against him of $\$ 125.78$, exclusive of $\$ 3,376.32$ retained by him for commissions on the purchase of stocks.

In 1827, B. Homans (son of the late B. Homans) received $\$ 840.00$ for two halfyearly dividends on Washington Bank stock, ending $30^{\text {th }}$ April, 1827, by order of the Secretary of the Navy, which he omitted to pay over. The amount is charged to his account, on which there is a balance against him of $\$ 372.87$.

In 1828, George Macdaniel collected, by order of the Secretary of the Navy, $\$ 926.00$ from the agent of the Bank of Columbia, being for six months' unclaimed dividends due $20^{\text {th }}$ March, 1823. This sum not having been paid over, is charged to his account, on which there is a balance claimed of $\$ 1,251.08$.

Two surplus dividends of $\$ 700$ each, declared by the Bank of Washington in June and August, 1817, do not appear on the books of the navy pension fund. From the bank return, the late B. Homans received the first, but to whom the second was paid does not appear.

These dividends not paid over and charged to the accounts of the agents totaled $\$ 3,726.50$. These were the cumulative amounts not remitted to the fund over the period 1817 through 1828.

## Notes

1. In the terminology of the day, a "stock" was actually an instrument of debtwhat we would call a "bond."
2. The original source of the data on the fund's transactions is $A S P-N A, 1-4$.
3. This research project began when the authors first saw the table on page 696 in Seybert (1818) indicating that the navy pension fund was holding stock in these private banks. The realization that in the 1800s the government was managing a pension fund that included private equities immediately stimulated our interest, and we began the study that culminated in this book.

[^0]:    Source: $A S P-N A, 1$.
    Values were reported to the nearest cent in the annual reports and have been rounded to the nearest dollar amount. Totals may not equal sums because
    of rounding.
    ${ }^{(a)}$ purchase of $\$ 2,000$ Navy Sixes was made on April 19, 1806 , and the debt was repaid on October 1 . The end-of-year value of the portfolio was $\$ 165,963$.
    (b) The $\$ 59,300$ Louisiana 6 percent holdings matured on January 1, 1809. The Columbia Bank shares were purchased over the period July-September (b) The $\$ 59,300$ Louisiana 6 percent holdings matured on January 1, 1809. The Columbia Bank shares were purchased over the period July-September
    1809 and at the end of the year included 283 complete shares and 343 short shares. At year-end, the total portfolio was valued at $\$ 220,397$. ${ }^{\text {(c) }}$ Columbia Bank shares included 476 complete shares and 150 short shares.
    ${ }^{(d)}$ The bank shares included complete and short shares in the following amounts: Columbia Bank, 476 complete shares and 150 short shares; Union Bank, 300 complete shares and 200 short shares; and Washington Bank, 300 complete shares and 200 short shares.

    600 complete shares; and Washington Bank, 700 complete shares.
    ${ }^{(f)}$ For bank shares, there is no change in whole or short shares from 1812.

