## Postal Service Investment and Interest Rate Risk

AUDIT REPORT

Report Number 22-035-R23 | January 18, 2023



OFFICE OF NSPECTOR GENERAL

## Table of Contents

### Cover

Highlights	1
Background	1
What We Did	1
What We Found	1
Recommendations	1
Transmittal Letter	2
Results	3
Introduction/Objective	3
Background	3
Findings Summary	5
Finding #1: Investment Opportunities	5
Cash Neutral Environment	6
DFA Projection with Adjusted Pension Plan Amortization Payments	8
Recommendation #1	11
Recommendation #2	11
Recommendation #3	11
Finding #2: Borrowing Options	12
Recommendation #4	13
Recommendation #5	13
Management's Comments	13
Evaluation of Management's Comments	
Appendices	15
Appendix A: Additional Information	
Scope and Methodology	16
Prior Audit Coverage	
Appendix B: Management's Comments	
Contact Information	22

## Highlights

#### Background

The U.S. Postal Service holds its cash in the Postal Service Fund with the Federal Reserve Bank of New York and, traditionally, has invested its excess cash in highly liquid, overnight investments (Overnight Treasuries) issued by the U.S. Department of Treasury (Treasury), where interest rate changes are more pronounced than in longerterm investments. Postal Service cash has grown from \$2.3 billion in fiscal year (FY) 2013 to \$19.6 billion at year-end FY 2022.

Additionally, the Postal Service can raise cash by issuing debt. From 1999 through 2019, when it expired, Postal Service borrowings were governed by a Note Purchase Agreement (NPA). The Postal Service is required to notify Treasury of its intent to issue debt and allow Treasury the first option to purchase.

#### What We Did

Our objective was to assess the Postal Service's investment of its cash balances and identify opportunities to improve investment and borrowing strategies and to reduce interest rate risk.

#### What We Found

The Postal Service has an opportunity to improve its investment strategy to reduce interest rate risk. For time horizons consistent with the Delivering for America (DFA) plan, we found that diversifying its cash investment portfolio to invest in longer-term Treasuries would enable the Postal Service to meet operational requirements and maintain funds for DFA initiatives. Such a strategy would greatly reduce risk without sacrificing returns on its cash investments.

Additionally, the Postal Service's borrowing strategy demonstrates a significant disparity between interest income and interest expense due to almost two years of nearly zero percent interest rates on investments. To reduce the gap, the Postal Service should optimize borrowing cost over its planning horizon. Historically the agreement with Treasury has provided the Postal Service with certainty on borrowing conditions, but it expired in 2019. Working with Treasury to re-establish such an agreement with set terms is integral to effective cash management.

#### Recommendations

We recommended management design a cash investment strategy that incorporates longer-term securities; work with Treasury to extend the investing authority and include investment securities beyond two years to accurately align with DFA initiatives; reestablish a Note Purchase Agreement with Treasury; incorporate a borrowing strategy to achieve DFA goals and reduce the gap between interest income and expense.

1

## **Transmittal Letter**

INSPECTOR GENERAL UNITED STATES FORTAL SERVICE	OFFICE OF INSPECT	OR GENERAL	
	UNITED STATES POS	STAL SERVICE	
Januar	y 18, 2023		
MEMO	RANDUM FOR:	JOSEPH CORBETT CHIEF FINANCIAL OFFICER AND EXECUTIVE VICE PRESIDENT	
		Alan Mac Mullin	
FROM	:	Alan MacMullin Deputy Assistant Inspector General for Finance, Pricing, and Human Capital	
SUBJE	ECT:	Audit Report – Postal Service Investment and Interest Rate Risk (Report Number 22-035-R23)	
This re Rate R		esults of our audit of the Postal Service's Investment and Interest	
		ration and courtesies provided by your staff. If you have any questions or on, please contact Lorie Nelson, Director, Finance, or me at 703-248-2100.	
Attachr	ment		
cc:	cc: Postmaster General Corporate Audit Response Management Secretary of the Board		

## Results

#### Introduction/Objective

This report presents the results of our self-initiated audit of the U.S. Postal Service's Investment and Interest Rate Risk (Project Number 22-035). Our objective was to assess the Postal Service's investment of its cash balances and identify opportunities to improve investment and borrowing strategies and to reduce interest rate risk. See Appendix A for additional information about this audit.

#### Background

The Postal Service holds its cash in the Postal Service Fund with the Federal Reserve Bank of New York and has traditionally invested its excess cash in highly liquid, overnight investments (Overnight Treasuries) issued by the U.S. Department of Treasury (Treasury). If the Postal Service possesses excess cash not needed to fund operational commitments, it can request Treasury to invest its cash in securities<sup>1</sup> guaranteed by the federal government. According to a 1977 opinion by the U.S. Department of Justice's Attorney General, Treasury has the sole authority to invest the excess cash and determine which government securities to purchase. Treasury must approve any change in the investment strategy. This approach, investing in Overnight Treasuries, changed in September 2022, when the Postal Service actively solicited, and the Treasury agreed, to allow it to expand its investment options to include securities with maturities up to two years.<sup>2</sup> This agreement expires at the end of fiscal year (FY) 2025.

The Postal Service can also raise cash by issuing debt. Postal Service debt cannot exceed \$15 billion and annual net increases are limited to \$3 billion, measured at fiscal year-end. The Postal Service is required to notify Treasury of its intent to issue debt and allow it the first option to purchase. If Treasury elects not to purchase debt, the Postal Service can issue and sell debt to other parties in public or private debt markets. For almost 50 years, Treasury has consistently purchased the debt by directing the Postal Service to conduct its borrowings with the Federal Financing Bank<sup>3</sup> (FFB). As of September 30, "If the Postal Service possesses excess cash not needed to fund operational commitments, it can request Treasury to invest its cash in securities guaranteed by the federal government."

2022, the Postal Service had \$10 billion in outstanding debt with the FFB, including \$5.5 billion in floating rate debt and \$4.5 billion in fixed rate debt.

From 1999 through 2019, Postal Service borrowings were governed by a Note Purchase Agreement (NPA)<sup>4</sup> with the FFB, which provided a menu of fixed- and floating-rate debt, flexible credit lines, and real-time pricing. Although the NPA expired on August 31, 2019, commitments to borrow and lines of credit survived the expiration as a contractual matter, and at that time the Postal Service borrowed up to \$14 billion. Since then, it has been repaying its debt as it comes due. The Postal Service currently has \$10 billion in outstanding debt — \$5.5 billion is floating-rate and \$4.5 billion is fixed-rate.

The Postal Service has endured a challenging operational environment over the past fifteen years, with technological developments decreasing the demand for Priority Mail and increasing the highly competitive package delivery industry. The Postal Service is mandated to remain self-sufficient with limited government appropriations.

Postal Service cash has grown from \$2.3 billion in FY 2013 to \$19.6 billion at year-end FY 2022. The Postal Service reduced, delayed, or canceled its planned capital investments (technology, facilities, and transportation equipment) in these years, which has helped with accumulating cash. More recently, accumulated cash has grown significantly due to increased package volumes during the pandemic, First-Class Mail prices that can increase above the

<sup>1</sup> These include such instruments as Treasury bills, notes, bonds, and Treasury inflation-protected securities.

<sup>2</sup> The Postal Service recently began investing in securities with maturities of 3 months.

<sup>3</sup> A government corporation of the U.S. under the general supervision and direction of Treasury. The FFB provides financing to help federal agencies manage their borrowing and lending programs and ensures that all federal government borrowing is conducted through Treasury.

<sup>4</sup> A legal document that establishes the terms and conditions for the FFB's periodic purchase of Postal Service debt.

Consumer Price Index, and the influx of \$10 billion from the Coronavirus Aid, Relief, and Economic Security Act.<sup>5</sup> Additionally elimination of the prefunding of retirement health benefits due to the passage of The Postal Reform Act<sup>6</sup> will reduce near-term cash obligations.<sup>7</sup>

Figure 1 shows the balance of Postal Service's cash from FY-end 2013 through 2021.

Figure 1. U.S. Postal Service Balance of Cash



Source: U.S. Postal Service Forms 10-K.

Postal Service cash is also directly impacted by changes in interest rates, which is more pronounced in shorter-term investments due to reinvestment risk.8 It is important to appreciate that the interest earnings on Overnight Treasuries are uncertain as the Overnight Interest Rate is driven largely by Federal Reserve policy, which can change quickly, resulting in reinvestment risk, which is inherent in the Postal Service's current approach. A recent history of rates is seen in Figure 2. Interest rates peaked at 2.5 percent in 2018 when the Federal Reserve continued to increase rates. Shortly afterwards, it reversed course and reduced interest rates to 1.5 percent in early 2020 at which point the pandemic spread throughout the world, and rates decreased dramatically. After almost two years of nearly zero percent interest rates as a policy response, interest rates moved higher as a response to current inflationary pressures. Initially, inflation was perceived as transitory,<sup>9</sup> but from June 2021 to June 2022, the U.S. experienced the largest 12-month inflation

increase (9.1 percent)<sup>10</sup> since the one experienced from December 1980 to December 1981.<sup>11</sup>



Figure 2. Historical Overnight Rates

Source: Segal Marco Advisors (Segal).

Further, economic trends have been volatile over the last year. In January 2022, interest rates were low and have substantially risen over the last nine months due to market conditions, as shown in Figure 3.





Source: Bloomberg Finance L.P.

We contracted with Segal Marco Advisors (Segal) who used stochastic<sup>12</sup> (random) yield curve modeling

<sup>5</sup> Enacted as Public Law 116-136 (the "CARES Act") in response to the COVID-19 pandemic.

<sup>6</sup> Enacted as Public Law 117-108, signed into law on April 6, 2022.

<sup>7</sup> Beginning in FY 2026, the Postal Service will make payments to the Office of Personnel Management (OPM); based on the difference between annuitant health benefits premiums and net claims costs, should claims costs exceed premium payments. Postal Service management estimated that amount to be \$1.3 billion. Further, when the Postal Service Retiree Health Fund is exhausted (estimated to be FY 2037) the Postal Service will begin paying annuitants' health benefits premiums.

 <sup>8</sup> Uncertainty related to the maturing of a fixed income investment prior to the investment horizon and thus the need to reinvest in a future uncertain yield environment.
9 Price gains that are expected to be temporary and not part of a long-term trend.

<sup>10</sup> As measured by the Consumer Price Index for All Urban Consumers (CPI-U, the most widely cited measure of inflation.

<sup>11</sup> BLS, "Consumer Price Index Summary," Economic News Release, U.S. Bureau of Labor Statistics, July 13, 2022.

<sup>12</sup> A type of modeling that is widely used in the financial industry to manage assets and liabilities with lots of uncertainties, to forecast the probability of various outcomes under different conditions using random variables.

to estimate potential investment outcomes over an investment horizon consistent with the Delivering for America (DFA) plan. The purpose of our analysis was to quantify opportunity costs associated with liquidity.<sup>13</sup> We completed our analysis for the Postal Service cash-on-hand only and did not include its retirement plan assets because the Postal Service does not administer or control how those funds are invested.

The modeling used cash flows based on implementation of DFA initiatives and was calibrated to match the market consensus view at June 2022<sup>14</sup> rates. Qualitatively, the model's yield curve was upward sloping at time of calibration, June 2022, because Segal interpreted that the Federal Reserve would continue to increase interest rates. Interest rates did continue to increase through the end of FY 2022. See Appendix A for more information on the modeling used.

#### **Findings Summary**

The Postal Service has an opportunity to improve its investment strategy to reduce interest rate risk. The Postal Service has traditionally invested in Overnight Treasuries where interest rates change quickly. Interest rates have substantially risen over the past year so overnight investment securities are currently viable. However, as the economic outlook stabilizes and interest rates plateau, it would be advantageous for the Postal Service to diversify its cash investment portfolio by investing in longer-term securities. This investment approach would greatly reduce its risk profile while generating more predictable returns on its cash to complement the initiatives in its DFA plan.

We compared the Postal Service's traditional approach against alternative investment strategies and found that investing cash in longer-term Treasuries would enable the Postal Service to continue to meet current operational requirements and maintain funds for DFA initiatives while not sacrificing any return.<sup>15</sup> Investing only in short-term securities drastically increases the risk of a wider array of outcomes that do not necessarily generate higher returns. Longer-term investments mitigate this source of uncertainty by matching the maturity of the investment with the investment horizon. We also analyzed the Postal Service's borrowing strategy, which demonstrates a significant disparity between interest income and interest expense. From FY 2018 through FY 2022, the Postal Service had between \$8.8 billion and \$23 billion in cash and between \$10 and \$14 billion in debt, yet it recorded significantly more interest expense than interest earned.<sup>16</sup> This five-year period included almost two years of nearly zero percent interest rates on Overnight Treasuries, but an average of 2.5 percent in cost to carry fixed-rate debt. To reduce the gap, the Postal Service must optimize borrowing costs over its planning horizon.

Historically the NPA has provided the Postal Service with certainty on borrowing conditions with Treasury; however, it expired in FY 2019. The Postal Service is at a disadvantage when it does not have an agreement with its primary lender for known borrowing terms and available lines of credit. With an updated NPA as part of a sound borrowing strategy for effective cash management, the Postal Service would have set terms that govern its borrowing and, as a result, it can better manage its debt and work towards mirroring its investments to offset its interest costs.

Although our analysis relies on events and conditions during a specific time, when the DFA was published and when Segal's model was calibrated, our strategies detailed in this report are for overall cash management in various economic environments. The date of the modeling does not affect this report's conclusions that in most of the cashflow scenarios risk can be reduced by extending the duration of Treasury securities in which the Postal Service invests.

#### Finding #1: Investment Opportunities

The Postal Service has an opportunity to improve its investment strategy and to reduce interest rate risk. By diversifying its cash investment portfolio to include longer-term securities, it could greatly reduce its risk profile while generating more predictable returns on its cash. The Postal Service acknowledges the difficult business environment it is facing. To address the uncertainty of unexpected short-term operating costs, the Postal Service views short-term cash investments as prudent. However, short-term investments have opportunity costs associated with fluctuating interest rates when the investments

<sup>13</sup> Ease with which an asset or security can be converted into ready cash without affecting its market price.

<sup>14</sup> June 2022 rates were used to calibrate their model because that month's interest rate increase was the most aggressive since 1994 and done in response to continued rising inflation. Prior to that meeting, the Federal Reserve started raising rates in early 2022 after cutting rates for two years in response to the COVID-19 pandemic. Further, Segal concluded that using June 2022 rates instead of rates as of FY 2022 year-end would not cause material differences to their model.

<sup>15</sup> In certain outcomes, the upside is less than Overnight Treasuries, but the conservative nature of managing cash for future capital investment needs should not be driven by low probabilities of good outcomes.

<sup>16</sup> Interest expense to Treasury and earnings from Treasury securities.

are continually reinvested over an extended period. Investments with predictable returns can help the Postal Service achieve its DFA goal of generating enough revenue to cover its operating costs and debt repayments.

Segal analyzed the impact of investing in securities beyond those in which Postal Service management (management) traditionally invests. Treasury offers various investment options, with standard durations of 2, 3, 5, 7, or 10 years. To be consistent with DFA projections, the analysis focused on two investment horizons — the end of FY 2030 and about mid-way through that longer-term horizon, or the end of FY 2026. These are the 4¼- and 8¼-year Treasuries mentioned throughout this report.

We developed two operating scenarios using interest rates as of June 30, 2022, to evaluate different investment options."

We developed two operating scenarios using interest rates as of June 30, 2022, to evaluate different investment options.<sup>17</sup> Though interest rates have changed since the model was calibrated, our report is forward-looking to provide the Postal Service with strategies to reduce volatility. We then analyzed how cash accumulates at different maturity durations in the following two scenarios.

- A cash neutral environment is a basic scenario which excludes large cash expenditures and assumes cash flow from operations is sufficient to cover operational costs.
- A DFA scenario is based on DFA-projected operational cash flows with adjusted pension plan amortization payments. It also includes planned capital investments and debt repayments.

#### **Cash Neutral Environment**

This scenario illustrates the potential investment outcomes in the hypothetical scenario that Postal Service revenues cover all operating needs, and it has \$23 billion<sup>18</sup> in investible cash. This scenario is basic in that it does not include large cash expenditures and shows the risk and potential outcomes of investing in extended maturities in the simplest terms. This modeling presents useful information when analyzing the risk of investing for periods that match the Postal Service's DFA timeframe. The strategies analyzed included (1) total cash in overnight securities, the Postal Service's current approach; (2) total cash in longer-term securities; and (3) one that matches overnight investments to short-term variable debt and allocates the remainder of cash to match DFA timeframes and longer-term debt repayments. Segal projected investments based on estimates of cash. Table 1 shows, for FY 2026 and FY 2030 horizons, the allocation of cash we used as the starting point for modeling across each of the three investment strategies.

#### Table 1. Starting Cash Allocation for FY 2026 and FY 2030 Horizons

Strategies	Description	Allocation in Overnight Treasuries (in Billions)	Allocation in 4¼- or 8¼-Year Treasury (in Billions)	Total (in Billions)
1	Overnight Treasuries	\$23.0	\$0.0	\$23.0
2	4¼- or 8¼-Year Treasury	\$0.0	\$23.0	\$23.0
3	Overnight Treasuries + 4¼- or 8¼-Year Treasury	\$5.5 <sup>19</sup>	\$17.5	\$23.0

Source: Segal analysis.

As shown in Figure 4, the model projects cash at a particular horizon through 2,000 simulations and produces observations at each projected dollar amount. The distribution shows the likelihood of an outcome happening for each dollar amount. For example, for Overnight Treasuries at the FY 2026 horizon, the model had 100 observations where the outcome was \$24.4 billion; the model had fewer than 40 observations of the higher outcome at \$25.3 billion. The probability for both the highest and lowest outcomes is much less than those near the median.

<sup>17 4&</sup>lt;sup>1</sup>/<sub>4</sub>- or 8<sup>1</sup>/<sub>4</sub>-Year Treasuries are modeled by Segal to match DFA timeframes.

<sup>18</sup> Represents cash as of September 30, 2021, less the April 15, 2022, debt repayment of \$1 billion (rounded).

<sup>19</sup> As of June 30, 2022, the Postal Service had \$5.5 billion in floating rate debt. Overnight Treasuries align the timeframes of investment and debt maturities.

#### Figure 4. Stochastic Modeling Outputs Source: Segal.

Number of Observations Out of 2,000 Simulations



Figure 5 shows the converted outputs, the results of the three investment strategies for each horizon by risk ranges and percentiles. The percentiles represent the percentage of outcomes above and below that level. The 50th percentile represents the dollar amount whereby one-half of the outcomes exceed the dollar amount and one-half of the outcomes are below the dollar amount, or the median. One could think of the 95th percentile as the best possible outcome (when the returns are the highest),<sup>20</sup> and the 5th percentile as the worst outcome (when the returns are the lowest).<sup>21</sup>

The reduction in risk as you move from left to right in the strategies is illustrated in Figure 5 by the narrowing of the corresponding floating bars. Ceteris paribus<sup>22</sup> strategies with narrower bars are good because the Postal Service will have greater certainty regarding cash holdings for future capital investments.



20 In other words, 5 percent of the outcomes exceeded that dollar amount.

21 In other words, 5 percent of the outcomes equaled or were less than that dollar amount.

22 Other conditions remaining the same

The analysis shown in Figure 5 illustrates a significant downside in the current investment strategy. In FY 2026, the midpoint horizon, the longer-term investments have returns that are slightly higher at the 50th percentile. However, in the worst-case outcome (the 5th percentile), the longer-term investment scenarios generate significantly better outcomes than Overnight Treasuries. In the worstcase scenario, the 4¼-Year Treasury and the Overnight + 4¼-Year Treasury generate \$1.2 billion and \$1.6 billion more, respectively, than Overnight Treasuries. The key take-away is the 4¼-Year Treasury is the best strategy in this scenario because it secures greater certainty in cash holdings available to meet future capital investments while not sacrificing any return. Granted, the upside now is less than Overnight Treasuries, but the conservative nature of managing cash for future capital investment needs should not be driven by the low probability of good outcomes.

As you move to the FY 2030 horizon, the risk associated with Overnight Treasuries significantly increases. At the 50th percentile, the returns on longer-term securities are greater than Overnight Treasuries. The 8¼-Year Treasury and the Overnight + 8¼-Year Treasury generate \$664 million and \$533 million more, respectively, than the Overnight Treasuries. Further when you examine how these longer-term securities perform in the worst-case scenario, the longer-term options return \$2.8 billion and \$4.2 billion more than Overnight Treasuries.

In both the FY 2026 and FY 2030 horizons, when the Postal Service diversifies its cash investment portfolio to include longer-term securities, it can greatly reduce its risk profile while generating higher returns on its cash. This reduction of risk is shown, for FY 2026, if the Postal Service invested in 4¼-Year Treasuries, the range of potential outcomes is \$1.1 billion (difference between the 95th percentile – \$24.1 billion and the 5th percentile – \$23.0 billion), versus \$3.3 billion if it solely invested in Overnight Treasuries. When you extend the horizon to FY 2030, the range is \$3.6 billion for the 8½-Year Treasury, yet that range of potential outcomes balloons to \$8.9 billion for Overnight Treasuries. This illustrates that although the modeling shows greater returns for Overnight Treasuries at the best-case outcome (95th percentile), they produce significant uncertainty over both investment horizons because of the reinvestment risk associated with unknown future short-term Treasury yields. The longer-term investments mitigate this source of uncertainty by matching the maturity of the investment with the investment horizon (there is no reinvestment risk).

#### DFA Projection with Adjusted Pension Plan

<sup>66</sup>The longer-term investments mitigate this source of uncertainty by matching the maturity of the investment with the investment horizon (there is no reinvestment risk).<sup>99</sup>

#### **Amortization Payments**

This scenario illustrates potential investment outcomes using DFA-projected operational cash flows,<sup>23</sup> planned capital investments, and debt repayments. We reduced projected cash outlays for estimated FERS amortization payments required by the Postal Regulatory Commission retirementbased rate authority.<sup>24</sup> This resulted in a starting cash balance of \$22.3 billion<sup>25</sup> and reduced the amount of cash by about \$7.8 billion over the next eight years.

Using these projections, Segal modeled the outcomes at different horizons, FY 2024, FY 2026, and FY 2030. Figure 6 shows how Segal's modeling works specific to this scenario.

<sup>23</sup> The DFA plan provided year-end cash projections for FY 2021 through FY 2030 based on the assumption that all initiatives in the DFA plan are implemented within their assumed timeline. The audit team updated the FY 2021 projections with actual year-end cash and estimated FY 2022 year-end cash based on actual data from Quarter (Q) 1 through Q3.

<sup>24</sup> In November 2020, the PRC adopted a new Retirement-Based Rate Authority, Order Number 5763, to target the Postal Service's annual retirement amortization payments. While the Postal Service has not always made these payments as scheduled, they are required to remit to the OPM all revenue raised under the retirement rate authority towards the amortization payments. The retirement-based rate authority is being phased in starting in FY 2021 through FY 2025. We therefore adjusted DFA net cashflows from operations to only include our estimation of those minimum required amortization payments.

<sup>25</sup> Represents cash as of September 30, 2021, revised with U.S. Postal Service Office of Inspector General (OIG) estimates for FY 2022 cash use.

#### Figure 6. Segal Modeling of DFA-Adjusted Cash Flows



Source: Segal analysis.

As shown in Figure 7, at the FY 2024 horizon, the range of outcomes shown for the 4¼-Year + 3-Month Treasury demonstrates that longer-term maturities are not always the ideal choice. If management is relatively comfortable that business operations will produce strong cashflow (at least as strong as those modeled in the DFA scenario above) over the next two years but is less comfortable over the next four years, and considering the Treasury requirement<sup>26</sup> that agencies should develop investment strategies to select investments with maturity dates that coincide with disbursement needs, then a 2-Year Bond paired with \$5.5 billion in 3-Month Treasury bills would be considered optimal. In FY 2024, all investments have returns that are comparable at the 50th percentile; however, the wide distribution of outcomes between the 95th and 5th percentiles produced by the 4¼-Year + 3-Month Treasury shows greater risk because these bonds still have two more years to reach maturity. Therefore, a 2-year Treasury is a good option to include with Overnight securities to have a tighter array of returns to use for planned capital expenditures. This scenario aligns with Treasury's recent approval for the Postal Service to invest in securities with maturities up to two years.



26 Treasury Financial Manual Chapter 4300, "Responsibilities Relating To Government Investment Accounts And Investment In Government Account Series Securities" Section 4335.95.

#### Figure 8. FY 2026 Investment Options in the DFA Projection Environment Source: Segal analysis.



As shown in Figure 8, in FY 2026, the midpoint horizon – the value of the combination of the 4¼ Treasury – becomes clearer. There is very little reinvestment risk as the maturity of the investment is aligned with the horizon. Even in the worst-case outcome (the 5th percentile), the longer-term investment scenarios generate better outcomes than Overnight Treasuries. In the worst-case outcome, the 2-Year Treasury and the 4¼-Year + 3-Month Treasury generate \$631 million (\$16,901 million less \$16,270 million) and \$1.0 billion more (\$17,294 million less \$16,270 million), respectively, than the Overnight Treasuries.

The key take-away is the 4¼-Year + 3-Month Treasury is the best strategy based on current market conditions because the median asset value is improved with significantly less range of outcomes (less reinvestment risk). And importantly, the downside asset value (5th percentile result) secures almost \$1 billion more than Overnight Treasuries. These cash holdings can be used to meet future capital investments in the DFA plan while not sacrificing any return.

As shown in Figure 9, while a longer maturity bond (more than 4-Years) would be optimal for a FY 2030 horizon, it is still reassuring how well the 4¼-Year + 3-Month Treasury performs compared to the Overnight Treasury over the extended investment window. At the 50th percentile, the returns on 4¼-Year + 3-Month Treasury are \$241 million (\$17,565 million minus \$17,324 million) greater than Overnight Treasuries. The worst-case scenario (5th percentile) is \$1.7 billion better with the 4¼-Year + 3-Month Treasury than it is with the Overnight Treasuries.

#### Figure 9. FY 2030 Investment Options in the DFA Projection Environment

Source: Segal analysis.



As shown in all the scenarios above, investing cash in longer-term Treasuries enables the Postal Service to continue to meet current operational requirements and maintain funds to respond to changes in the business environment. Investing only in short-term securities increases the risk of a wider array of outcomes that do not necessarily generate higher returns. However, continuing with \$5.5 billion in shorter duration investments as a hedge to the floating rate debt would further improve the distribution of outcomes regardless of the longer maturity investment with which it is paired.

The Postal Service is in a unique position to extend the duration of its securities, having recently been given approval to invest in Treasury securities up to two years. With interest rates rising currently, the Postal Service is benefitting from shorter-term securities by not locking into rates. However, as the economic outlook stabilizes and interest rates plateau, it would be advantageous to invest in longer-term securities. This investment approach would complement the initiatives in its DFA plan. By taking action to diversify its investment portfolio, the Postal Service could realize a significant improvement over its current approach. We considered the difference between the 4<sup>1</sup>/<sub>4</sub>-Year + 3-Month Treasury and the Overnight Treasuries at the 50th percentile,<sup>27</sup> \$172 million (\$17,581 million less \$17,409 million) which

is generated over the four-year midpoint horizon (FY 2026) for the DFA plan, as revenue loss.<sup>28</sup>

#### **Recommendation #1**

We recommend the Chief Financial Officer and

**Executive Vice President** consider the investment information presented in the report to design a cash investment strategy that incorporates longer-term securities.

#### **Recommendation #2**

We recommend the **Chief Financial Officer and Executive Vice President** work with the U.S. Treasury to extend the length of the Treasury authority for the Postal Service to invest in securities with maturities greater than one business day past September 30, 2025, to accurately plan and align its investment plan with Delivering for America initiatives.

#### **Recommendation #3**

We recommend the **Chief Financial Officer and Executive Vice President** work with the U.S. Treasury to allow the Postal Service to hold investments with maturities greater than two years considering that long-term securities reduce uncertainty and investment risk and align its investments to Delivering for America initiatives.

<sup>27</sup> We used the 50th percentile for our impact analysis because it represents the central tendency, or median outcome of the results.

<sup>28</sup> Amount the Postal Service is (or was) entitled to receive but was underpaid or not realized because policies, procedures, agreements, requirements, or good business practices were lacking or not followed. May be recoverable or unrecoverable.

#### Finding #2: Borrowing Options

The Postal Service has an opportunity to improve its borrowing strategy and to reduce interest rate risk. Analysis of the Postal Service's borrowing strategy demonstrates a significant disparity between interest income and interest expense. From FY 2018 through FY 2022, the Postal Service recorded \$1 billion in interest expense to Treasury, while earning \$484 million in interest from investments of its cash in Treasury securities when cash and debt were about the same amount (see Figure 10). This five-year period included almost two years of nearly zero percent interest rates on Overnight Treasuries, but an average of 2.5 percent in cost to carry fixed-rate debt. Therefore, from FY 2018 through FY 2022, it cost the Postal Service \$547 million to hold its debt with the FFB.<sup>29</sup> The Postal Service will continue to accumulate a loss if it is unable to reduce or negate the gap between interest income and interest expense (mismatch risk).<sup>30</sup>

As stated earlier, the Postal Service can borrow up to \$15 billion in total debt with net increases limited to \$3 billion in any fiscal year. Currently, the Postal Service has \$10 billion outstanding with the FFB. Historically, Postal Service borrowing with the FFB was governed by the NPA, which expired in 2019. Since then, many of the commitments to borrow and lines of credit have expired or are expiring.

Currently, the Postal Service possesses a large amount of cash but anticipates large cash outlays into FY 2030. With a significant amount of debt, this provides a number of scenarios to improve their cash management. It could use some of its cash that it does not plan to use for DFA initiatives to pay off portions of its fixed rate debt to reduce mismatch risk. However, there may be a time that the Postal Service needs to borrow precautionary cash<sup>31</sup> to address future DFA initiatives. Its new authority from Treasury, allowing the Postal Service to invest in securities with maturities up to two years, creates opportunities for the Postal Service to reduce its borrowing expenses based on its current circumstances.

- If an NPA is signed on a short term basis and additional cash is needed, it would be advantageous to borrow as floating rate debt and hedge that debt with 3-month Treasuries.<sup>32</sup> In this situation, it should maximize borrowing variable rate debt. The Postal Service could match its overnight and shorter-term investments to the variable rate debt, creating a strategy that minimizes mismatch risk.
- If the Postal Service both negotiates with Treasury to allow it to invest in securities greater than two years, it renews and enhances its NPA with Treasury and interest rates are lower, then fixed rate debt becomes a viable option because the Postal Service could create a laddered bond portfolio that matches interest expense and investment income (a cash management strategy at no cost). Additionally, fixed rate debt would provide stable interest rates over the longterm.



29 In this fiscal year, the Postal Service earned more in interest income due to rising interest rates. When rates rose on Overnight Treasuries, rates also rose on longer-term Treasuries and if the Postal Service invests in longer-term securities, they also obtain added certainty when locking in higher rates.

30 Mismatch risk is the incorrect matching of assets and liabilities. Mismatch risk arises when assets generating cash to cover liabilities do not have the same interest rates, and/or maturity dates of the liabilities.

31 Cash reserves that are set aside for future needs.

32 The interest rate on floating rate debt is recalculated every 3 months.

Historically, the NPA has provided the Postal Service with certainty on borrowing conditions with Treasury. The Postal Service is at a disadvantage, as an operating business, when it does not have an agreement with its primary lender for known borrowing terms and available lines of credit. With an updated NPA, the Postal Service will have set terms that govern its borrowing and as a result, it can better manage its debt and work towards mirroring its investments to offset its interest costs. A sound borrowing strategy that includes an NPA is an integral part of effective cash management.

#### **Recommendation #4**

We recommend the **Chief Financial Officer and Executive Vice President** work with the U.S. Treasury to establish a Note Purchase Agreement to include borrowing terms and conditions which will assist the Postal Service with managing borrowing as part of overall cash management.

#### **Recommendation #5**

We recommend the **Chief Financial Officer and Executive Vice President** incorporate an appropriate borrowing strategy to achieve Delivering For America goals and reduce the gap between interest income and interest expense.

#### **Management's Comments**

Management disagreed fully or in part with the findings but agreed with recommendations 1, 4, and 5. Management neither agreed nor disagreed with recommendations 2 and 3 but does not plan to take action at this time.

Regarding finding 1, management stated treasury bonds with up to 4<sup>1</sup>/<sub>4</sub>-year investment maturities do not consider the terms of the Postal Service's investing authorization from Treasury that limits investment maturities to two years. Additionally, management stated that we are in unusual times with the yield curve inverted and with most experts predicting that both short- and longer-term government securities' yields are likely to increase over the short-term. Further, management stated that holding investments for periods up to 4¼ years or more does not contemplate restricted cash and would produce liquidity risks. Management also stated that under the recommended investment scenarios, the Postal Service would not have sufficient liquidity to meet all its obligations and could be forced to liquidate investment holdings early

which goes against the Postal Service's investing authorization's terms.

Regarding finding 2, management stated that the OIG's analysis did not incorporate the current economic or interest rate environment or ensure that sufficient liquidity is available to fund operations over multiple years. Further, they stated that the review focused on a snapshot in time when the Postal Service was limited to investing only in overnight securities when rates were at near historic lows and there was no borrowing agreement with Treasury. However, they agreed that reestablishing a new borrowing agreement is integral for effective cash management and on December 15, 2022, management signed a new agreement provided by the FFB with authority to invest in government securities with up to 2-year maturities. Management anticipates the agreement to be countersigned and effective in January 2023.

Regarding recommendation 1, management stated they monitor interest rates and economic trends and identify investment opportunities that ensure their contractual, regulatory, and liquidity requirements are met. When the investment environment settles, they plan to invest in a laddered manner with investment maturities aligned to projected capital and business needs, with a buffer for short-term liquidity use. Management uses pre-investment analyses, financial models, and regular crossfunctional liquidity meetings and plans to further document its Investment Policy by March 31, 2023.

Regarding recommendation 2, management does not plan to make a request regarding its investment authorities with Treasury at this time. Although the Postal Service sought the investing authority to be an indefinite/longer term agreement, Treasury insisted on aligned end dates for both the investing and pending borrowing agreements of September 30, 2025. With almost a 3-year duration as compared to the previous 1-year agreements, management stated this is a huge step forward and the timing is not right to re-open negotiations.

Regarding recommendation 3, management does not plan to act at this time, stating that its current investing agreement, signed in September 2022, aligns with Treasury's proposed two-year duration. Further, management stated that while the theory of holding investments for longer periods locks in certainty, the concept fails if liquidity is needed prior to maturity and the agreement notes that the Postal Service should hold investments to maturity. Also, based on Postal Service modeling and liquidity reviews, management stated the recommended durations are not viable options given the planned and potential cash outflows over the OIG's analysis period. However, management plans to ask for longer maturities after the Postal Service has a fully executed borrowing agreement.

Regarding recommendation 4, management signed a final agreement on December 15, 2022, with FFB and Treasury and expects finalizations to be completed by January 2023.

Regarding recommendation 5, management stated that a borrowing strategy that includes sufficient liquidity is a priority, and their primary focus is to plan for and provide long- and short-term liquidity for the Postal Service. Management considers this recommendation implemented with their current borrowing strategy.

In separate correspondence, management disagreed with the monetary impact. They stated that based on the current yield curve, the Postal Service would have better results using 3- and 6-month and 1-year Treasuries.

See Appendix B for management's comments in their entirety.

#### **Evaluation of Management's Comments**

The U.S. Postal Service OIG considers management's comments responsive to the recommendations in the report.

Regarding finding 1, we acknowledge the unusual times with the yield curve inverted. However, as we state in our report, our analyses provided information for a cash management strategy overall, not at any one point in time as management may have interpreted. We suggested that in some circumstances such as the current environment, investing in Treasuries with shorter maturities of 1-, 2-, 3-, and 6-month and 1- and 2-year durations may be optimal. Overall, our analyses showed that it would be advantageous for the Postal Service to diversify its cash investments by including longer-term securities in its portfolio. Further, we provided scenarios that illustrated potential investment outcomes using the Postal Service's projected operational cash flows, planned capital investments, and debt repayments outlined in its DFA plan. Those scenarios provided realistic investible cash while still allowing sufficient liquidity to meet Postal Service obligations without

liquidating investment holdings early. Additionally, we continue to believe our calculation of revenue loss is appropriate. We calculated it using the midpoint horizon for the DFA using an investment approach aligned with the initiatives in the DFA plan.

Regarding finding 2, management stated it is integral for effective cash management to reestablish a new borrowing agreement and on December 15, 2022, signed a new agreement provided by the FFB and anticipates the agreement to be countersigned and effective in January of 2023, which is what we recommended in this report.

The intent of recommendations 2 and 3 was to encourage management to continue discussions with Treasury to further enhance the Postal Service's investing options. We applaud management's recent efforts to obtain an investment agreement with Treasury that goes beyond traditional investment maturities and agreement timeframes. Accordingly, we will not take these recommendations through the audit resolution process. We will continue to monitor these areas as part of our ongoing oversight.

The purpose of recommendation 5 was to ensure management considered the Postal Service's debt environment as it enhances overall cash management strategies. We acknowledge management's focus on liquidity and the pending NPA. Accordingly, we agree that this recommendation is implemented with their current borrowing strategy.

Recommendations I and 4 require OIG concurrence before closure. The OIG requests written confirmation when corrective actions are completed. Recommendations I and 4 should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendations can be closed. Finally, we consider recommendations 2, 3 and 5 closed with the issuance of this report.

## Appendices

Appendix A: Additional Information	
Scope and Methodology	
Prior Audit Coverage	
Appendix B: Management's Comments	

## Appendix A: Additional Information

#### Scope and Methodology

The audit assessed the Postal Service's investment of its cash balances and identified opportunities to improve investment and borrowing strategies and to reduce its interest rate risk.

To accomplish our objective, we:

- Interviewed Postal Service Corporate Treasury personnel and reviewed policies and procedures related to Postal Service investing and borrowing strategies.
- Reviewed multiple years of the Postal Service's financial data.
- Reviewed Treasury policies in the *Treasury* Financial Manual regarding investment in government account series securities.
- Reviewed the Postal Service's Delivering for America plan for cash flow projections.
- Performed market research and awarded a contract to subject matter experts regarding corporate best practices in managing investments of cash balances and interest rate risk.
- Contracted with Segal for stochastic (random) yield curve modeling of different cash investment scenarios and assessments of debt.

Segal's model generates a new yield curve each period with yields ranging from overnight to 30 years. The central tendency path (median trial) of the overnight yield was calibrated to match the market consensus view at the time of calibration, June 2022. Qualitatively, the yield curve was upward sloping at time of calibration. The yield curves include random shocks to account for market uncertainty and a random shock is added each period to the overnight interest rate's path in each of the 2,000 stochastic simulations. The shock we modeled results in a normal distribution for yields.

 Analyzed and provided oversight and quality control reviews on Segal's investment projections and borrowing strategies. We conducted this performance audit from April 2022 through January 2023 in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. We discussed our observations and conclusions with management on December 13, 2022, and included their comments where appropriate.

We did not perform tests of internal controls over the Postal Services' investing or borrowing processes, as it was not our objective to provide assurance on the effectiveness of the related internal controls. Absence of internal controls testing did not significantly affect our audit findings and conclusions. The scope of this audit was to assess the Postal Service's investment and borrowing strategies. We did not plan to consider or report on the reliability of the data published in the Postal Service reports that we used. However, we performed reasonableness and validity tests on the DFA and retirement rate authority cash projections that were used in Segal's modeling. We did not plan to assess the reliability of any computer-generated data for purposes of this report.

#### **Prior Audit Coverage**

The OIG did not identify any prior audits or reviews related to the objective of this audit within the last five years.

### Appendix B: Management's Comments

JOSEPH CORRETT Over Francis, Offician Elecutive Vice President



January 6, 2023

JOHN CIHOTA DIRECTOR, AUDIT SERVICES

SUBJECT: Management Response: Postal Service Investment and Interest Rate Risk (Audit Number 22-035-DRAFT)

The Postal Service has reviewed the findings and recommendations contained in the draft audit report, *Postal Service Investment and Interest Rate Risk.* Our comments regarding the two findings are as follows.

#### Finding 1

The Postal Service has an opportunity to improve its investment strategy to reduce interest rate risk. For time horizons consistent with the Delivering for America (DFA) plan, we found that diversifying its cash investment portfolio to invest in longer-term Treasuries would enable the Postal Service to meet operational requirements and maintain funds for DFA initiatives. Such a strategy would greatly reduce risk without sacrificing returns on its cash investments.

The OIG's recommendation to invest, as you are aware, in US Treasury bonds with up to 4 ¼ year investment maturities does not take into account the terms of our September 2022 authorization from the US Treasury that limits our investment maturities to two years. We lack the authority you suggest we exercise.

Also, we are in unusual times with the yield curve inverted with some shorter-term securities having higher yields than longer-term, and with most experts predicting that both short- and longer-term government securities' yields are likely to increase over the short-term.

Management does not concur with this finding, because the finding does not contemplate restricted cash and potential payments that the Postal Service must make. Under the recommended investment scenarios, the Postal Service would not have sufficient liquidity to meet its obligations (if all payments are made) and could be forced to liquidate investment holdings early which goes against our investment letter's terms. These terms were shared with the OIG team.

475 L'Exerner Pusce, SW Westwarton, DC 20260 (000) 202-268 6272 Fee: 202-209-4304 memory app. com There are contractual and regulatory restrictions on how the Postal Service's cash is held and invested which limit the Postal Service's ability to invest for extended periods. In summary, holding investments for periods up to 4 ¼ years or more would produce liquidity risks. In addition, a 4 ¼ plus investment duration in the current investment environment with inverted yield curves would produce suboptimal investment income over the near term.

#### Finding 2

The Postal Service's borrowing strategy demonstrates a significant disparity between interest income and interest expense due to almost two years of nearly zero percent interest rates on investments. To reduce the gap, the Postal Service should optimize borrowing cost over its planning horizon. Historically the agreement with Treasury has provided the Postal Service with certainty on borrowing conditions, but it expired in 2019. Working with Treasury to re-establish such an agreement with set terms is integral to effective cash management.

Management does not fully concur with this finding.

The Postal Service does agree it is integral to effective cash management to reestablish a new borrowing agreement and has signed a new agreement provided by the Federal Financing Bank (FFB) and anticipates it to be countersigned and effective in January of 2023.

The OIG's review focused on a snapshot in time when we were limited to investing only in overnight securities and these rates were at near historic lows—many days zero. Also, we had relatively little cash and no borrowing agreement at that point in time. As our cash grew by over \$15 billion (\$10 billion with the CARES ACT, \$3 billion with the Inflation Reduction Act – restricted funding for battery electric vehicles and infrastructure, and improved cash flows from the package business due to COVID era) more than could have been predicted in 2019 and given the change in cash levels, we took actions. We began discussions with the US Treasury on obtaining the authorization to invest for longer terms than overnight securities. The Postmaster General appealed to the Secretary of Treasury and after negotiations, we were successful in obtaining authority to invest in US Government securities with up to 2-year maturities.

Additionally, to improve liquidity we concluded negotiations on a new Note Purchase Agreement (NPA) with the FFB and recently signed this on December 15, 2022. FFB's countersignature is expected shortly.

In their analysis, Segal Marco Advisors made a number of hypothetical investment assumptions that did not incorporate the Postal Service's actual liquidity requirements and operational constraints. For example, in the strategies noted in Table 1, Strategy #3 assumed \$5.5 billion in overnight Treasuries would be sufficient to cover operational losses, capital expenditures, year-end payments, debt repayments, and deferred social security obligations for a multi-year analysis period. The analysis had \$17.5 billion in 4 ¼ or 8 ¼ year notes which would tie up

cash in long-term investments at rates that are currently 100 basis points (bp) lower than the 3-month T-Bill rate. In general, the analysis by Segal does not incorporate the current economic or interest rate environment or critical real world postal objectives such as ensuring sufficient liquidity is ready and available to fund operations over multiple years.

#### Recommendation [1]:

We recommend the Chief Financial Officer and Executive Vice President consider the investment information presented in the report to design a cash investment strategy that incorporates longer-term securities.

#### Management Response/Action Plan:

Management agrees with this recommendation. Management monitors interest rates and general economic trends daily and identifies appropriate opportunities to invest/hedge with longer-term investments subject to ensuring that our contractual, regulatory, and liquidity requirements are met. As we emerge from this unusual environment with inverted investment curves, we do plan to invest in a laddered manner that is situationally appropriate with investment maturities aligned to projected capital and business needs, with a buffer maintained for short-term liquidity use.

<u>Target Implementation Date</u>: Implemented. Corporate Treasury has an Investment Policy, required pre-investment analyses and signoffs, as well as financial models to identify liquidity needs, market rates, uses diverse forecasts, and targets investment holdings and investment periods to align with our near- and long-term liquidity needs. In addition, Finance holds regular cross-functional liquidity meetings to review and identify corporate needs. This policy will be further documented by March 31, 2023

#### Responsible Official: Treasurer

#### Recommendation [2]:

We recommend the Chief Financial Officer and Executive Vice President work with the U.S. Treasury to extend the length of the Treasury authority for the Postal Service to invest in securities with maturities greater than one business day past September 30, 2025, to accurately plan and align its investment plan with Delivering for America initiatives.

#### Management Response/Action Plan:

Management does not plan to make this request at this time. After petitioning the Secretary of Treasury on May 6, 2022, the Postal Service and US Treasury engaged in four months of negotiations to establish the Treasury note and bill types, durations, the processes of purchasing longer-term securities, anti-arbitrage clauses, and duration of the authority. While the Postal Service sought an indefinite/longer term agreement, unfortunately the Treasury insisted on aligning agreement end dates of September 30, 2025, for both the pending borrowing agreement (NPA) and the

investment authorization. While we preferred longer-term agreements, we were successful in negotiating a borrowing agreement with almost a three-year duration, as compared to the one-year agreements we had to annually negotiate and renew, before Treasury refused to renew in 2019. So taken as a package (the NPA and Investment authority) is a huge step forward and the timing is not right for re-opening negotiations.

Target Implementation Date: N/A

Responsible Official; N/A

#### Recommendation [3]:

We recommend the Chief Financial Officer and Executive Vice President work with the U.S. Treasury to allow the Postal Service to hold investments with maturities greater than two years considering that long-term securities reduce uncertainty and investment risk and align its investments to Delivering for America initiatives.

#### Management Response/Action Plan;

This investing agreement was just signed four months ago, and Treasury indicated that two years was their proposal, hence we requested two years. At the same time, we were negotiating a borrowing agreement. Of course, we always seek maximum flexibility, even in our current environment, and we do plan to ask for longer maturities after we have a fully executed borrowing agreement. These agreements are intertwined. While the theory of holding investments for longer periods locks in certainty, the concept fails if liquidity is needed prior to maturity or if long-term investments must be sold prior to maturity to provide liquidity. This goes against the agreement which notes that the Postal Service should hold investments to maturity. The Postal Service has modeled and reviewed its liquidity needs and the durations recommended by the OIG are not viable options given the planned and potential cash outflows over the OIG's analysis period.

Target Implementation Date: N/A

Responsible Official; N/A

#### Recommendation [4]

We recommend the Chief Financial Officer and Executive Vice President work with the U.S. Treasury to establish a Note Purchase Agreement to include borrowing terms and conditions which will assist the Postal Service with managing borrowing as part of overall cash management.

#### Management Response/Action Plan:

Management agrees with this recommendation. The Postal Service has signed a final agreement and the FFB and US Treasury are in the process of finalizing their internal clearance memos.

4

Target Implementation Date: January 2023

Responsible Official: Chief Financial Officer and Executive Vice President

#### Recommendation [5]

We recommend the Chief Financial Officer and Executive Vice President incorporate an appropriate borrowing strategy to achieve Delivering for America goals and reduce the gap between interest income and interest expense.

#### Management Response/Action Plan:

Management agrees with this recommendation. Ensuring our borrowing strategy includes sufficient liquidity for capital expenditures and operating expenses to achieve Delivering for America goals is a priority. Our primary focus is to plan for and provide long- and short-term liquidity for the Postal Service.

Target Implementation Date: Implemented.

Responsible Official: Treasurer

Joseph Corbett

cc: Manager, Corporate Audit Response Management

5

## OFF INSP GEN UNITED STATES

# e of ECTOR ERAL



Contact us via our Hotline and FOIA forms. Follow us on social networks. Stay informed.

1735 North Lynn Street, Arlington, VA 22209-2020 (703) 248-2100

For media inquiries, please email press@uspsoig.gov or call (703) 248-2100