

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM  
DIVISION OF RESERVE BANK OPERATIONS AND PAYMENT SYSTEMS

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**2021 Currency Budget**

**Action**

On December 10, 2020, the Board approved the calendar year (CY) 2021 currency operating budget of \$1,095.8 million, which includes funding for 19 authorized Board positions (an increase of 1 authorized position over the 2020 budget). No additional capital funding was requested for the multicycle capital budget of \$3.2 million that was approved in 2018. The operating budget is an increase of \$271.4 million, or 32.9 percent, from 2020 forecasted expenses of \$824.5 million and includes \$1,030.0 million in Bureau of Engraving and Printing (BEP) costs and \$65.8 million in Board costs. The increase is primarily for higher banknote printing costs due to the demand for cash that followed the onset of the COVID-19 pandemic.

**Discussion**

The currency budget provides funds to reimburse the BEP for expenses related to the production of banknotes and the Board's activities related to banknote issuance.<sup>1</sup> The Board is responsible for issuing the nation's currency in the form of Federal Reserve notes. As part of its role as issuing authority, the Board has a wide variety of responsibilities, such as ensuring that there is an adequate supply of notes in circulation and protecting the integrity of and maintaining the public's confidence in U.S. currency. The Board works with the Reserve Banks, the Treasury Department, the BEP, and the U.S. Secret Service (USSS) to ensure that the notes meet quality standards from production through destruction, monitors counterfeiting threats for each denomination, and conducts adversarial analysis to ensure resistance to counterfeiting. The budget includes the costs of shipping new currency from the BEP to Reserve Banks and shipping fit currency between Reserve Banks. The budget also funds the Currency Education

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<sup>1</sup> The Board reimburses the BEP for all costs related to the production of currency because the BEP does not receive federal appropriations. Section 16 of the Federal Reserve Act requires that all costs incurred for the issuing of notes shall be paid for by the Board and included in its assessments to the Reserve Banks. All operations and capital investments of the BEP are financed by a revolving fund that is reimbursed through product sales, nearly all of which are sales of Federal Reserve notes to the Board to fulfill its annual print order. Certain costs are reimbursed based on budgeted billing rates per month, while other costs are billed to the Board as expenses are incurred.

Program (CEP), which aims to protect and maintain confidence in currency worldwide by providing information and conducting outreach to key stakeholders.

Under authority delegated by the Board, the director of the Division of Reserve Bank Operations and Payment Systems (RBOPS) submits an annual fiscal year (FY) print order for new currency to the director of the BEP.<sup>2</sup> Upon reviewing the order, the BEP forecasts printing costs for new currency during the upcoming calendar year. BEP costs include fixed and variable costs for printing Federal Reserve notes, facility costs, and support costs, and constitute 94.0 percent of the currency operating budget. The Board's portion of the budget makes up the remaining 6.0 percent and aligns with the Board's strategic priorities. Board staff reviews the BEP and Board expenses and recommends approval to the Board. Once the Board approves the budget, it assesses the costs of currency to each Federal Reserve Bank monthly. Table 1 provides the costs included in the Board's 2020 budget, 2020 forecast, and proposed 2021 budget.

**Table 1**  
**Currency budget by budget category**  
**(calendar year)**

Budget Category	2020 Budget (000s)	2020 Forecast (000s)	Variance 20F to 20B		2021 Budget (000s)	Variance 21B to 20F	
			Amount (000s)	Percent		Amount (000s)	Percent
<b>BEP Costs</b>	<b>\$827,667</b>	<b>\$773,065</b>	<b>-\$54,602</b>	<b>-6.6</b>	<b>\$1,029,986</b>	<b>\$256,921</b>	<b>33.2</b>
<b>Printing Federal Reserve notes<sup>a</sup></b>	<b>\$732,935</b>	<b>\$768,224</b>	<b>\$35,289</b>	<b>4.8</b>	<b>\$975,417</b>	<b>\$207,193</b>	<b>27.0</b>
BEP fixed printing costs	\$499,836	\$475,836	-\$24,000	-4.8	\$518,628	\$42,792	9.0
BEP variable printing costs	\$233,099	\$292,388	\$59,289	25.4	\$456,789	\$164,401	56.2
<b>BEP facility reimbursements</b>	<b>\$90,000</b>	<b>\$0</b>	<b>-\$90,000</b>	<b>-100.0</b>	<b>\$49,607</b>	<b>\$49,607</b>	<b>N/A</b>
Ft. Worth facility expansion	\$60,000	\$0	-\$60,000	-100.0	\$0	\$0	N/A
New D.C. facility	\$30,000	\$0	-\$30,000	-100.0	\$49,607	\$49,607	N/A
<b>BEP support costs</b>	<b>\$4,732</b>	<b>\$4,841</b>	<b>\$109</b>	<b>2.3</b>	<b>\$4,962</b>	<b>\$121</b>	<b>2.5</b>
Currency reader	\$955	\$872	-\$84	-8.8	\$1,072	\$200	23.0
Destruction and compliance	\$3,776	\$3,969	\$193	5.1	\$3,890	-\$79	-2.0
<b>Board costs</b>	<b>\$49,486</b>	<b>\$51,415</b>	<b>\$1,929</b>	<b>3.9</b>	<b>\$65,848</b>	<b>\$14,432</b>	<b>28.1</b>
Currency transportation	\$19,042	\$25,484	\$6,442	33.8	\$33,618	\$8,134	31.9
Banknote development <sup>b,c</sup>	\$26,952	\$22,231	-\$4,720	-17.5	\$26,375	\$4,144	18.6
Currency education <sup>c</sup>	\$3,492	\$3,700	\$208	6.0	\$5,854	\$2,154	58.2
<b>Operating budget</b>	<b>\$877,153</b>	<b>\$824,480</b>	<b>-\$52,673</b>	<b>-6.0</b>	<b>\$1,095,834</b>	<b>\$271,353</b>	<b>32.9</b>

<b>Positions<sup>d</sup></b>	<b>18</b>	<b>18</b>	<b>0</b>	<b>0.0</b>	<b>19</b>	<b>1</b>	<b>5.6</b>
Banknote development	10	10	0	0.0	10	0	0.0
Currency education	8	8	0	0.0	9	1	12.5

Note: Dollar figures have been rounded to the nearest thousand, but calculation are based on actual dollar and cent figures resulting in rounding errors in the subtotals, totals, and variance figures.

Note: Position figures represent authorized Board employment count for the Currency Budget.

a BEP forecast figures represent the Board payments to the BEP based on budgeted billing rates.

b The Banknote development budget category in prior years included Research and development and Annual contributions and management support.

c Personnel, travel, and training costs were previously displayed as line items in the budget. These costs are now included in the Banknote development and Currency education budget categories that they support.

d The 2020 forecast includes the total authorized positions, of which 15 are currently filled and 3 are vacant.

<sup>2</sup> The Board delivers the annual print order to the BEP director in August of each year, and copies are available on [the Board's public website](#).

Table 2 provides details on the volume of notes the Board included in its 2020 budget, its 2020 forecast, and its 2021 budget. In April 2020, the Board approved an increase to its FY 2020 print order to address the high demand for currency resulting from the COVID-19 pandemic. Subsequently, in July 2020, the Board approved a final revision to its FY 2020 order to prioritize the production of \$20 through \$100 denominations, which experienced greater increases in demand for a longer period than did the lower denominations of \$1 through \$10 notes.

**Table 2**  
**Production of notes**

	2020 Budget (000s)	2020 Forecast (000s)	Variance 20F to 20B		2021 Budget (000s)	Variance 21B to 20F	
			Amount (000s)	Percent		Amount (000s)	Percent
Calendar year deliveries	5,168,000	6,000,000	832,000	16.1	8,424,339	2,424,339	40.4
Fiscal year print order	5,168,000	5,795,200	627,200	12.1	9,612,800	3,817,600	65.9

### ***2020 Operating Budget Performance***

Total 2020 operating expenses are forecasted to be \$824.5 million, which is \$52.7 million, or 6.0 percent, less than the budgeted amount. The budget underrun is primarily attributable to the BEP funding capital projects by drawing down the revolving fund rather than receiving additional reimbursements from the Board.<sup>3</sup> Also contributing to the budget underrun is the Banknote development forecast, which has been adjusted in response to a termination of a design services contract for the next family of notes, delays for several projects that were initially impacted by the COVID-19 pandemic, and new contracts that took longer to procure than anticipated.

The cost underrun is partially offset by a cost overrun in variable production and transportation costs due to the COVID-19 pandemic-related demand. On July 30, the director of RBOPS, acting under delegated authority, approved a final print order increase that added 627.2 million notes to the original 2020 fiscal year print order, to address high demand for currency and to replenish depleted inventories resulting from the COVID-19 pandemic. The increased demand for cash also led to increased shipments

<sup>3</sup> Board and BEP staff have agreed that the revolving fund balance should include 60 days of operating expenses plus 90 days of forecasted capital expenditures for facility reimbursements. There can be large fluctuations in the BEP's revolving fund balance, given the timing of invoice payments, which can then result in an amount that exceeds the agreed-upon balance. Because the high balance that continued throughout the year, the Board withheld BEP facility reimbursements and a portion of BEP fixed printing costs in an effort to reduce the balance and align it with operating and capital needs.

from the BEP facilities to the Reserve Banks. The transportation increases have been concentrated in higher denomination notes, which typically ship by air, making their shipment costs higher than those of lower-denomination, over-the-road shipments. In addition, alternative transportation methods are more expensive than traditional methods.

<sup>4</sup> The Board of Governors approved the expected 2020 currency budget overruns for production and transportation costs on July 15, 2020.

Currency education expenses are forecasted to be higher than the budgeted amount because of changes in scope for the communication and education activities, partly in response to the pandemic. The work has been focused on an expanded digital presence of the program, as well as an increase in international outreach activities.

### ***2021 Operating Budget Request Overview: BEP Costs***

The proposed 2021 BEP budget is \$1,030.0 million, which is \$256.9 million, or 33.2 percent, more than 2020 forecasted expenses. The primary driver of this increase is higher printing costs to fund increased banknote production given the continued net payment demand.

The proposed budget for fixed printing costs is \$518.6 million, which is \$42.8 million, or 9.0 percent, more than 2020 forecasted expenses.<sup>5</sup> The increase is primarily attributable to pandemic-related expenses, including additional healthcare staff, disinfection services, and information technology support. Pay increases and increased staffing to fill vacancies also contribute to the increase. Variable costs are increasing because of the Board's higher volume print order (see table 2) and denominational mix, which is skewed to the higher denomination notes that are more expensive to produce. Additionally, new paper contracts are expected to increase by about \$24 million.

The BEP facility reimbursements represent the Board's plan to resume funding the new BEP building project in Washington, D.C. The total cost of the new facility and production machinery in Washington, D.C. is estimated to be \$1.4 billion over the life of the project, which began in 2019 and is expected to be completed in 2030. This project is in the development stage, and we expect to reimburse the BEP \$49.6

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<sup>4</sup> "Alternative transportation methods" include chartered air service, which cost six times more than commercial air shipments, and are necessary to provide just-in-time shipments of cash to Reserve Banks with depleted inventory and risk of meeting market demand.

<sup>5</sup> Fixed printing costs include manufacturing overhead and support, general and administrative, research and development, prepress and engraving, and capital.

million for design and site demolition costs in 2021. The Fort Worth expansion has an estimated total cost of \$259.9 million and construction is estimated to be completed in 2023.

***2021 Operating Budget Request Overview: Board Costs***

Board costs are projected to be \$65.8 million, or 28.1 percent, more than 2020 forecasted expenses. The increase is primarily driven by currency transportation costs due to the higher volume of notes to ship, higher denomination allocation, and alternate transportation methods for business continuity purposes.

The Banknote development budget funds security feature development, counterfeit deterrence, annual memberships, and banknote manufacturing support initiatives. The components of this budget include personnel, support and overhead, travel, training, and depreciation expenses that support banknote development initiatives. In 2021, budget increases are for contract services to develop prototype equipment that would assess quality at the BEP by performing plate, sheet, and note inspection. The Board will also conduct market research on, and expand outreach to, banknote equipment manufacturers to identify trends in the market for equipment that accepts and dispenses banknotes. Contract resources will support financial management and construction oversight for reimbursements of the new Washington D.C. currency production facility.

The Banknote development budget funds the Counterfeit Currency Processing Facility initiative for the continued development of prototype technology to identify, analyze, and classify suspect counterfeit notes. Increased funding for this initiative is to conduct a business process study. Board membership in the Central Bank Counterfeit Deterrence Group and the Reproduction Research Center are also included.

The currency education budget funds the Board's currency education program, which is designed to protect and maintain confidence in U.S. currency worldwide. In 2021, currency education will broaden its domestic and international outreach to businesses and consumers, create digital content that supports both classroom and remote learning options, and maintain the [uscurrency.gov](https://uscurrency.gov) educational website. Contractual budget increases allow for more mature digital outreach strategies and support domestic and international outreach activities.

Additional budget increases include personnel costs to support all phases of the cash strategic plan and the inclusion of support and overhead costs allocated to Banknote development and Currency education programs.<sup>6</sup> The 2021 currency budget includes 19 positions, an increase of one authorized position from the 2020 budget.<sup>7</sup> The new position will support the education of users around the world about designs and security features of U.S. currency and will focus on domestic and international outreach efforts to financial institutions, retailers, and the gaming industry.

### ***2021 Capital Budget***

**Table 3**  
**Multicycle capital budget by budget category**  
**(calendar year)**

<b>Budget category</b>	<b>Project Life Budget (000s)</b>	<b>2019 and Prior Actual</b>	<b>2020 Forecast (000s)</b>	<b>2021 Budget (000s)</b>	<b>2022 and Subsequent Forecast</b>
<b>Automated counterfeit analysis<sup>a</sup></b>	<b>\$3,207</b>	<b>\$0</b>	<b>\$182</b>	<b>\$165</b>	<b>\$2,861</b>

<sup>a</sup>This multicycle capital budget was approved in December 2018.

Table 3 details the \$3.2 million multicycle capital budget, which the Board approved in 2018 for information technology development and equipment to support the Counterfeit Currency Processing Facility initiative, and no additional capital funds are requested at this time. Board staff forecasts capital expenditures of \$0.2 million for CY 2020 and \$0.2 million in CY 2021. This project is in the developmental stage, and the minimal capital expenditures are the result of an intentional decision to ensure business processes are in place before costly capital infrastructure is developed.

### ***2021 Budget Risks***

The most significant risks in the 2021 budget are related to the variable printing and currency transportation costs, BEP facility reimbursements, and COVID-19 uncertainty and related impacts to the budget.

The FY 2021 print order is a range between 7.6 and 9.6 billion notes, which represents a forecast of the number of notes needed to meet increased demand for

<sup>6</sup> Beginning in 2021, the Currency budget will receive support and overhead costs from the Board of Governors for enterprise information technology, facilities, law enforcement, human resources, and other services.

<sup>7</sup> The Board approved the 2020 Currency Budget with 18 authorized positions and a plan for two additional staff over the subsequent two years.

currency because of the COVID-19 pandemic, replace unfit notes that are destroyed, and ensure sufficient inventory levels. The 2021 budget funds the variable printing costs for the mostly likely scenario of note deliveries and related transportation costs. Board and BEP staff will adjust production of each denomination within these ranges to best match available production with volatile demand throughout the year.

The FY 2021 proposed budget includes facility reimbursements to the BEP for projected payments associated with the new building project in Washington, D.C. If the new building project changes in schedule or scope, or the Fort Worth expansion experiences costs that cannot be funded from the revolving fund, we will seek approval for additional funding.

The Board has experienced budget overruns in some budget categories because of the COVID-19 pandemic, and we expect this to continue into 2021. While we have proposed forecasts and estimates for the most likely expense based on the most current information available, we recognize that the implications and duration of the pandemic continue to develop. This uncertain and changing environment could affect resources, contract services, travel, training, and conference costs associated with the proposed budget.