

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

2023 Currency Budget

Action

On December 15, 2022, the Board approved the following:

1. A \$931.4 million single-cycle operating budget for 2023 primarily to reimburse Treasury for the costs of producing Federal Reserve notes. The budget also includes an addition of 2 authorized Board position counts in the currency issuance program, as presented in figure 1 by budget category.
2. A \$416.9 million multicycle project budget for future costs related to reimbursing the Bureau of Engraving and Printing (BEP) for their multiyear project costs, as presented in figure 3 by budget category.¹

On December 15, 2022, the Board conditionally approved the following:²

1. A \$787.0 million multicycle project budget for future costs related to reimbursing the BEP for their multiyear project costs for note production equipment, as presented in figure 3 by budget category.

Discussion

Statutory Responsibility

The currency budget provides funds to reimburse the BEP for costs related to the production of banknotes and the Board's activities related to banknote issuance.³ The currency budget funds activities to support the Board's role as issuing authority for the nation's currency, that is for Federal Reserve notes. As part of its role as issuing authority, the Board has a wide variety of responsibilities. First and foremost, the Board must ensure that there is an adequate supply of notes in circulation. To that end, the budget includes production costs, consistent with

¹ The multicycle project budget is a Board operating budget. Although the multicycle project budget funds capital projects, the assets belong to the BEP, and the budget is an operating expense for the Board.

² Conditional approval requires additional review and approval by the Director of RBOPS.

³ 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.

the annual fiscal year print order submitted by the Director of the Division of Reserve Bank Operations and Payment Systems (RBOPS) on behalf of the Board, as well as the costs of issuing new currency to Reserve Banks, which includes shipping new currency from the BEP to Reserve Banks, shipping fit currency between Reserve Banks, and program management to support long-term issuance strategies and resiliency.⁴

The Board, with support from the Reserve Banks, the Treasury Department, the BEP, and the U.S. Secret Service, also works to ensure that the notes meet quality standards from production through destruction. In addition, the Board plays a central role in protecting the integrity of and maintaining public confidence in U.S. currency. The U.S. Currency Program (USCP) stakeholders perform development and testing of security features and designs in support of the next banknote family. Board staff monitors counterfeiting threats for each denomination and conducts adversarial analysis to ensure resistance to counterfeiting. The currency budget also funds the Currency Education Program (CEP), which aims to protect and maintain confidence in U.S. currency worldwide by coordinating counterfeit-detection training to Reserve Bank and foreign central bank staff, and providing information about banknote security features. The CEP also conducts outreach to key stakeholders including Reserve Banks, commercial banks, retailers, and law enforcement agencies on USCP initiatives.

Currency Budget Overview

The currency budget comprises a single-cycle operating budget and a multicycle project budget. The single-cycle operating budget includes BEP and Board costs. The BEP submits a budget proposal that includes fixed and variable costs for printing Federal Reserve notes. The printing and related support costs constitute 92.2 percent of the 2023 single-cycle currency operating budget. The Board's portion of the 2023 single-cycle operating budget makes up the remaining 7.8 percent and aligns with the Board's strategic priorities. Multicycle project costs for the BEP's large-scale capital investments include the Fort Worth, Texas, western currency facility (WCF) expansion project, the Washington, D.C. Replacement Facility (DCRF) project, and note production equipment. Board staff reviews the BEP and Board costs and

⁴ 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](#).

recommends approval to the Board. Once the Board approves the budget, it assesses the costs of currency to each Federal Reserve Bank monthly.

Multiyear Strategic Initiatives

There are large-scale, strategic initiatives at the BEP and in the Federal Reserve System that are critical to the evolution of the USCP. Although some of the following programs have minimal effects on the current year budget, significant cost increases associated with the programs can be expected to materially impact the currency budget in future years.

- **Next Family of Notes:** The next family of Federal Reserve notes will include new technology and updated designs to outpace counterfeiting risks. The issuance of the next family of notes is planned for the \$10 note, followed by the \$50 note and then the \$20, \$5, and \$100 notes. The BEP's current estimated variable cost to produce the next family of \$10 notes is higher than the current production cost for \$10 notes. Additionally, the highest-security notes (the \$50s and \$100s) will include a greater number of and more-expensive security features.
- **DCRF:** A new BEP production facility will replace the original downtown building on 14th Street NW in Washington, D.C. The new building is designed to meet modern production requirements critical to the future of the USCP.⁵ In addition to the construction and equipment costs for DCRF, indirect production and transportation costs are projected to increase during the transition from the current facility to the new facility. A decline in production is expected during the transition that may necessitate the need to stockpile and transport inventory in advance of the move.
- **NextGen Program:** NextGen is a Federal Reserve System (FRS) initiative to replace the current aging high-speed currency processing equipment with new equipment and technology. This equipment plays a critical role in the USCP's ability to meet its mission and maintain confidence in U.S. currency by meeting demand for fit currency, maintaining currency quality, preventing the recirculation of potentially counterfeit notes, and ensuring effective risk and cost management for Reserve Bank cash operations. While the program's cost is included in the Reserve Bank budget, there are also indirect currency costs associated with the program's deployment. To prepare for replacing the

⁵ The rationale for the new facility is laid out in a Government Accountability Office (GAO) report published in April 2018: <https://www.gao.gov/products/gao-18-338>

existing 129 machines in 28 offices, Reserve Banks will build supplemental inventory while processing capabilities are reduced during the replacement period and until machines are operating with optimal output. Building inventory will increase currency budget costs for production and transportation of new notes, and transportation of fit and unprocessed notes between Reserve Banks to maintain balanced inventories. The Board will continue to appropriately plan for the adequate supply of notes in circulation during the replacement period.”

2022 Budget Performance and 2023 Budget

Figure 1 provides the single-cycle operating costs included in the Board’s 2022 budget, 2022 forecast, and 2023 budget. Figure 2 provides details on the volume of notes the Board included in its 2022 budget, its 2022 forecast, and its 2023 budget.

Figure 1: Single-cycle operating budget by budget category

Millions of dollars Budget category	2022 Budget	2022 Forecast	2023 Budget	Variance 22F to 22B		Variance 23B to 22F	
				Amount	Percent	Amount	Percent
				BEP costs	989.2	918.9	858.7
Printing Federal Reserve notes^a	983.8	913.8	852.5	(70.0)	-7.1%	(61.3)	-6.7%
Fixed printing costs	612.5	612.5	587.0	-	0.0%	(25.5)	-4.2%
Variable printing costs	371.3	301.3	265.5	(70.0)	-18.9%	(35.8)	-11.9%
BEP support costs	5.4	5.1	6.2	(0.3)	-5.7%	1.1	21.5%
Currency reader	1.0	0.8	1.0	(0.2)	-18.1%	0.2	24.4%
Destruction and compliance	4.4	4.3	5.2	(0.1)	-2.9%	0.9	21.0%
Board costs	70.8	60.5	72.8	(10.3)	-14.6%	12.2	20.2%
Currency issuance	37.6	28.3	33.6	(9.3)	-24.7%	5.4	18.9%
Banknote development	27.1	26.3	32.2	(0.8)	-3.1%	6.0	22.8%
Currency education	6.1	6.0	6.9	(0.2)	-2.8%	0.9	14.9%
Operating budget	1,060.0	979.4	931.4	(80.6)	-7.6%	(48.0)	-4.9%

Positions^b	20	20	22	0	0.0%	2	10.0%
Currency issuance	1	1	3	0	0.0%	2	200.0%
Banknote development	10	10	10	0	0.0%	0	0.0%
Currency education	9	9	9	0	0.0%	0	0.0%

Note: Here and in subsequent tables, components may not sum to totals and may not yield percentages shown because of rounding.

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

b Position figures represent authorized Board employment count for the Currency Budget, of which 17 are currently filled and 3 are vacant.

Figure 2: Production of notes

Millions of Notes Budget Category	2022 Budget	2022 Forecast	2023 Budget	Variance 22F to 22B		Variance 23B to 22F	
				Amount	Percent	Amount	Percent
Calendar year deliveries	7,209.6	5,810.2	5,402.8	-1,399.4	-19.4	-407.4	-7.0
Fiscal year print order	7,209.6	6,426.7	4,931.2	-782.9	-10.9	-1,495.5	-23.3

2022 Budget Performance

BEP Single-Cycle Operating Costs

Total 2022 BEP single-cycle operating costs are forecast to be \$918.9 million, which is \$70.3 million, or 7.1 percent, less than the budgeted amount. The budget underrun is primarily attributable to lower note deliveries in response to changing payment trends. Following updated payment trends, Reserve Bank inventories, and the need to prioritize testing for the next family of notes, BEP and Board staff agreed to reduce note deliveries to an estimated 5.8 billion notes for the calendar year 2022.

Board Single-Cycle Operating Costs

The Board single-cycle operating costs for 2022 are forecast to be \$10.3 million, or 14.6 percent, lower than the 2022 budget. The primary driver is lower currency issuance transportation costs given the reduced number of note deliveries from the BEP resulting from the change in demand. Because the demand volatility experienced during the peak of the pandemic has abated, the Board used fewer chartered air shipments than anticipated in the 2022 budget.⁶

2023 Operating Budget Overview

BEP Single-Cycle Operating Costs

The proposed 2023 BEP budget, which funds BEP printing and support costs, is \$858.7 million, which is \$60.2 million, or 6.6 percent, lower than the 2022 forecast. The 2023 budget decrease is attributable to a decrease in variable printing costs because of the lower expected note deliveries in 2023 than in 2022.⁷ Fixed costs are decreasing due to a change in

⁶ Chartered air shipments are six to seven times more expensive than commercial air; however, the chartered flights are used when more-timely transport of currency is required.

⁷ As noted on [the Board's public website](#), the FY 2023 print order is lower to allow the BEP to focus on strategic priorities including deferred equipment maintenance and security testing for the next family of notes.

budget treatment of capital investments.⁸ The decrease in fixed costs is partially offset by increased investments in research and development to support the new security features in the next family of notes. Beginning in 2023, staff recommend transferring certain capital investments from the single-cycle budget to the multicyle project budget as discussed in detail below.

BEP Multicycle Project Costs

Figure 3: Multicycle project budget by budget category

Millions of Dollars	2021 and Prior Actual	2022 Budget	2022 Forecast	2023 Forecast	2024 and Subsequent Forecast ^e	Current Multiyear Budget Approval
Budget Category						
BEP major project funding^a						
Fort Worth facility expansion (WCF) ^b	200.2	52.8	49.0	33.6	-	282.8
Washington, D.C. replacement facility (DCRF) ^c	45.4	5.5	22.5	62.3	TBD	134.1
<i>Pre-construction phase approval</i>	<i>45.4</i>	<i>5.5</i>	<i>22.5</i>	<i>62.3</i>	<i>4.0</i>	<i>134.1</i>
Projects designated for approval subtotal	245.6	58.3	71.5	95.9	4.0	416.9
Projects designated for conditional approval						
Note Production Equipment	111.9	N/A	23.4	43.8	607.9	787.0
Grand Total	357.5	58.3	94.9	139.7	TBD	1,204.0

a BEP forecast and actual figures represent the Board payments to the BEP. Funding for facility projects is provided a quarter in advance of the BEP's expected capital outlays.

b The total project life budget not to exceed \$282.8 million was approved by the Board on August 10, 2021.

c The DCRF replacement facility will seek phased approvals. The BEP's estimated project total is currently \$1,784.1 million.

The multicyle project budget submitted by the BEP includes budget authority for WCF, DCRF, and note production equipment (see figure 3).⁹ Before the 2022 budget, the BEP's major facility projects were approved on a single-cycle operating budget basis. Funds that were not expended were not carried over to the next calendar year. In 2022 the Board approved shifting the WCF and DCRF facility projects to the multiyear total cost approval process to ensure that the BEP has sufficient cash to pay obligations that span multiple budget years, provide regular reporting of lifetime project costs, and provide flexibility to manage inherent project changes. For the same reasons, funding the note production equipment within a multicyle project budget is preferable to the single-cycle operating budget. The total of \$1,204.0 million in multicyle project funding includes: \$282.8 million in continued support, which is the previously approved amount for WCF; \$134.1 million for DCRF; and \$787.0 million for note production equipment. Given the size of the budget and associated complexities, the note

⁸ Fixed printing costs include manufacturing overhead and support, general and administrative costs, research and development, prepress and engraving, and capital investments for BEP infrastructure. A portion of the capital investments in the fixed printing costs was moved to the multicyle project budget for note production equipment.

⁹ Budget authority approval for the multicyle project differs from the single-cycle budget in that funds will only be reimbursed after the Board is invoiced. Invoices should be remitted one quarter prior to when the funds will be expended.

production equipment is designated for conditional approval, requiring additional review and approval by the Director of RBOPS when funding is required.

In 2018, the BEP entered into an agreement to expand WCF to provide additional note production capabilities, which includes new machines, equipment, and more vault space. In August 2021, the Board approved a total WCF program budget of \$282.8 million. The 2022 forecast of \$49.0 million funded the completion of the production and administrative area expansions, labor costs, project contingencies, and a contractor request for equitable adjustment. The BEP expects to spend \$33.6 million in 2023 to complete and close out the project (see figure 3).

The Board approved a total of \$134.1 million in the 2023 multicycle budget for the DCRF current phase budget, only a small portion of the current estimated total cost of \$1,784.1 million. Consistent with governance and financial management discussions between the Board and BEP staff, Board staff will submit a budget request for the next phase of the project to the Board, currently anticipated in April 2023 after additional design documents and updated construction estimates become available.

In 2016, the director of RBOPS and the BEP agreed to a long-term manufacturing strategic plan to replace aging production equipment that is reviewed annually by Board and BEP staff.¹⁰ For increased cost transparency, to better align timing for projects that span multiple years, and to provide clarity on budget authority to the BEP, staff recommended the inclusion of a subset of the plan, note production equipment, in the multicycle project budget.¹¹ The note production equipment represents significant capital investment: printing presses to replace aging equipment at WCF, new printing presses for the DCRF, and security feature presses for both facilities to support design for the next family of notes. Given the timing of the submission and the additional review required, conditional approval of the \$787.0 million for existing contracts and contracts the BEP expects to award in 2023 was approved. The director of RBOPS will provide final approval once additional information is received and funding is required. Board staff will continue to work with BEP staff to update the plan and budget annually.

¹⁰ Per the current the Memorandum of Understanding (MOU), the BEP can acquire agreed-upon production equipment as part of the long-term manufacturing strategic plan without consulting with the director of RBOPS. The BEP will consult with the director of RBOPS for capital projects that exceed \$1 million that are not part of the plan. Board staff is working with BEP staff to update and improve the MOU which includes guidance to approve and fund capital projects.

¹¹ The remaining BEP capital projects are lower in dollar value: IT upgrades, security investments, and existing facility repair projects that will continue to be funded through the single-cycle operating budget.

Board Single-Cycle Operating Costs

The Board single-cycle operating costs for 2023 are projected to be \$72.8 million, which is \$12.2 million, or 20.2 percent, higher than the 2022 forecast costs. The increased budget is primarily driven by an increase of \$5.4 million for currency issuance and an increase of \$6.0 million for banknote development costs (see figure 3).

The currency issuance budget funds transportation, consulting, and personnel costs and is projected to increase by \$5.4 million, or 18.9 percent, from the 2022 forecast. Given the lower note deliveries in the print order, we project higher intra-System shipment costs to rebalance banknote inventories across the System. In addition, we expect transportation contract price increases due to various factors, which include labor shortages and increased vehicle and fuel costs. The 2023 budget also includes two positions and additional contract support for the Board Currency Desk.¹² Given the challenges experienced during the pandemic and the upcoming USCP strategic initiatives, staff engaged an external transportation consultant to evaluate the processes and structure of the Board Currency Desk. Based on these recommendations, an additional position is planned for a dedicated manager to support the required day-to-day operations and improve strategic planning processes.¹³ Additional contract costs are to support staff with the transportation contract rebid and to replace the aging shipment application.

The 2023 banknote development budget funds security feature development, counterfeit deterrence, annual memberships, and banknote manufacturing support initiatives and is projected to increase \$6.0 million, or 22.8 percent, from the 2022 forecast. In 2023, the Central Bank Counterfeit Deterrence Group membership fees are projected to increase to fund a vendor management contract to mitigate program risks. Banknote development contracts to support security feature testing and banknote development process consulting are also projected to increase. These increases will fund print trials to support the issuance of the next family of notes and banknote redesign process improvements.¹⁴

The 2023 currency education budget is \$0.9 million, or 14.9 percent, higher than the 2022 forecast. The currency education budget funds the Board's currency education program,

¹² The Board Currency Desk is responsible for the mission-essential function of issuing banknotes from the BEP to the 28 cash offices and facilitating shipments among cash offices through the use of armored carrier contracts.

¹³ The second position is the transfer of a position that currently fully supports the Board Currency Desk but is currently funded in the Board's budget.

¹⁴ In April 2022, the Board approved a \$5.0 million overrun to fund the banknote development process consulting contract. Due to procurement delays, the contract was not awarded until October 2022 for \$3.2 million. The remaining work will continue into 2023.

which is designed to protect and maintain confidence in U.S. currency worldwide through training, education, and communication. The 2023 budget increases are for personnel costs and to procure a tool to support stakeholder outreach efforts.

Indirect costs allocated to currency issuance, banknote development, and currency education are forecast to increase in 2023 to include allocations for information technology applications that primarily support production, issuance, and training activities.¹⁵

¹⁵ The currency budget includes indirect costs for enterprise IT, facilities, law enforcement, human resources, and other services. The personnel costs to fund academic assistance, accrued annual leave, the transportation subsidy, and interns are also funded through the indirect costs. Starting in 2023, to better align with our budget principles, we are allocating support costs for IT systems used for currency shipments and banknote tracking, to the currency budget. These costs were previously allocated to the Board budget.