

FEDERAL RESERVE SYSTEM

Docket No. OP-1687

Federal Reserve Bank Services

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Notice.

SUMMARY: The Board of Governors of the Federal Reserve System (Board) has approved the private sector adjustment factor (PSAF) for 2020 of \$18.9 million and the 2020 fee schedules for Federal Reserve priced services and electronic access. These actions were taken in accordance with the Monetary Control Act of 1980, which requires that, over the long run, fees for Federal Reserve priced services be established on the basis of all direct and indirect costs, including the PSAF.

DATES: The new fee schedules become effective January 2, 2020.

FOR FURTHER INFORMATION CONTACT: For questions regarding the fee schedules: David C. Mills, Deputy Associate Director, (202) 530-6265; Max Sinthorntham, Senior Financial Policy Analyst, (202) 452-2864; Amanda Holcombe, Financial Institution Policy Analyst, (202) 912-4625; Division of Reserve Bank Operations and Payment Systems. For questions regarding the PSAF: Casey Clark, Assistant Director/Manager, (202) 452-5232; Grace Milbank, Senior Financial Institution Policy Analyst, (202)

263-4828, Division of Reserve Bank Operations and Payment Systems. For users of Telecommunications Device for the Deaf (TDD) only, please call (202) 263-4869. Copies of the 2020 fee schedules for the check service are available from the Board, the Federal Reserve Banks, or the Reserve Banks' financial services web site at www.frb services.org.

I. Supplementary Information:

Private Sector Adjustment Factor, Priced Services Cost Recovery, and Overview of 2020 Price Changes

A. Overview — Each year, as required by the Monetary Control Act of 1980, the Reserve Banks set fees for priced services provided to depository institutions.¹ These fees are set to recover, over the long run, all direct and indirect costs and imputed costs, including financing costs, taxes, and certain other expenses, as well as the return on equity (profit) that will have been earned if a private business firm provided the services. The imputed costs and imputed profit are collectively referred to as the private-sector adjustment factor (PSAF). From 2009 through 2018, the Reserve

¹ On August 5, 2019, the Federal Reserve Board announced that the Reserve Banks will develop the FedNowSM Service, an interbank real-time gross settlement (RTGS) service with integrated clearing functionality, to support the provision of end-to-end faster payment services. The Board anticipates the FedNow Service will be available in 2023 or 2024. Following the introduction of the FedNow Service, the Board will regularly disclose the service's cost recovery and will monitor progress toward matching revenues and costs.

Banks recovered 102.6 percent of their total expenses (including imputed costs) and targeted after-tax profits or return on equity (ROE) for providing priced services.²

Table 1 summarizes 2018 actual, 2019 estimated, and 2020 budgeted cost-recovery rates for all priced services. Cost recovery is estimated to be 100.8 percent in 2019 and budgeted to be 100.2 percent in 2020.

Table 1

Aggregate Priced Services Pro Forma Cost and Revenue Performance ^a					
(dollars in millions)					
YEAR	1 ^b REVENUE	2 ^c TOTAL EXPENSE	3 NET INCOME (ROE) [1-2]	4 ^d TARGETED ROE	5 ^{e,f} RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2018 (actual)	\$442.5	\$428.1	\$14.4	\$5.2	102.1%
2019 (estimate)	442.4	433.4	9.0	5.4	100.8%
2020 (budget)	443.1	436.3	6.7	5.9	100.2%

a Calculations in this table and subsequent pro forma cost and revenue tables may be affected by rounding.

b Revenue includes imputed income on investments when equity is imputed at a level that meets minimum capital requirements and, when combined with liabilities, exceeds total assets (attachment 1). For 2020, the projected revenue assumes implementation of the fee changes.

c The calculation of total expense includes operating, imputed, and other expenses. Imputed and other expenses include taxes, Board of Governors' priced services expenses, the cost of float, and interest on imputed debt, if any. Credits or debits related to the accounting for pension plans under ASC 715 are also included.

d Targeted ROE is the after-tax ROE included in the PSAF.

e The recovery rates in this and subsequent tables do not reflect the unamortized gains or losses that must be recognized in accordance with ASC 715. Future gains or losses, and their effect on cost recovery, cannot be projected.

f For 2019 and 2020, credits or debits related to the accounting for pension plans under ASC 715 include service cost only with the adoption of ASU 2017-07 *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* (Topic 715).

² The 10-year recovery rate is based on the pro forma income statements for Federal Reserve priced services published in the Board's *Annual Report*. In accordance with Accounting Standards Codification (ASC) 715 *Compensation – Retirement Benefits*, the Reserve Banks recognized a cumulative reduction in equity related to the priced services' benefit plans. Including this cumulative reduction in equity from 2009 to 2018 results in cost recovery of 104.1 percent for the ten-year period. This measure of long-run cost recovery is also published in the Board's *Annual Report*.

Table 2 provides an overview of cost-recovery budgets, estimates, and performance for the 10-year period from 2009 to 2018, 2018 actual, 2019 budget, 2019 estimate, and 2020 budget by priced service.

Table 2

Priced Services Cost Recovery (percent)					
PRICED SERVICE	2009-2018	2018 ACTUAL	2019 BUDGET ^A	2019 ESTIMATE	2020 BUDGET ^B
All services	102.6	102.1	100.8	100.8	100.2
Check	105.3	102.7	101.9	102.9	102.8
FedACH	98.3	99.2	101.3	98.6	100.3
Fedwire Funds and NSS	102.1	105.8	100.5	102.4	98.2
Fedwire Securities	101.8	98.7	95.1	96.8	98.6

A The 2019 budget figures reflect the final budgets as approved by the Board in December 2018.

B The 2020 budget figures reflect preliminary budget information from the Reserve Banks. The Reserve Banks will submit final budget data to the Board in November 2019, for Board consideration in December 2019.

1. *2019 Estimated Performance* — The Reserve Banks estimate that they will recover 100.8 percent of the costs of providing priced services in 2019, including total expense and targeted ROE, compared with a 2019 budgeted recovery rate of 100.8 percent, as shown in table 2. Overall, the Reserve Banks estimate that they will fully recover actual and imputed costs and earn net income of \$9.0 million, compared with the targeted ROE of \$5.4 million. The Reserve Banks estimate that the check service and the Fedwire[®] Funds and National Settlement Services will achieve full cost recovery; however, the Reserve Banks continue to estimate that the FedACH[®] Service and the Fedwire Securities Service will not achieve full

cost recovery in 2019. Consistent with recent years, the FedACH Service will not achieve full cost recovery because of investment costs associated with the multiyear technology initiative to modernize its processing platform.³ This investment is expected to enhance efficiency, the overall quality of operations, and the Reserve Banks' ability to offer additional services to depository institutions. The Reserve Banks estimate that the Fedwire Securities Service will not achieve full cost recovery because of investment costs associated with initiatives to promote operational efficiency.

2. *2020 Private-Sector Adjustment Factor* — The 2020 PSAF for Reserve Bank priced services is \$18.9 million. This amount represents an increase of \$1.1 million from the 2019 PSAF of \$17.8 million. This increase is primarily the result of an increase in imputed return on equity and sales tax and partially offset by a decrease in Board of Governors expenses.

3. *2020 Projected Performance* — The Reserve Banks project a priced services cost recovery rate of 100.2 percent in 2020, with a net income of \$6.7 million and targeted ROE of \$5.9 million. The Reserve Banks project that the price changes will result in a 2.4 percent average price

³ The Reserve Banks have been engaged in a multiyear technology initiative to modernize the FedACH processing platform capabilities. The implementation of this initiative has moved from 2019 to 2020.

increase for customers. The Reserve Banks project that each of the individual service lines, other than the Fedwire Securities Service and the Fedwire Funds Service, will fully recover their costs for 2020. The Fedwire Services' underrecovery projections are largely driven by an anticipated decline in revenue due to a large Fedwire Funds participant's upcoming transition of its transfer origination activity off the Fedwire Funds Service, anticipated modest volume declines in certain product lines for the Fedwire Securities Service, and ongoing System investments in projects to increase technological resiliency. Both the Fedwire Funds Service and Fedwire Securities Service are projected to fully recover costs in the long run.⁴

The primary risks to the Reserve Banks' ability to achieve their targeted cost-recovery rates are unanticipated volume and revenue reductions and the potential for cost overruns from new and ongoing improvement initiatives. In light of these risks, the Reserve Banks will continue to refine their business and operational strategies to manage operating costs, to increase product revenue, and to capitalize on efficiencies gained from technology initiatives.

⁴ From 2011-2020, Fedwire Securities Service's projected ten-year average recovery rate is 101.6 percent and Fedwire Funds Service's projected ten-year average recovery rate is 102.4 percent.

4. *2020 Pricing* — The following summarizes the Reserve Banks' changes in fee schedules for priced services in 2020:

Check

- The Reserve Banks will reassign the tier placement of 1,607 and 124 return endpoints in the FedForward[®] and FedReturn[®] products, respectively.⁵ In addition, the Reserve Banks will adjust the frequency of endpoint tier reassignments from annual to every other year.
- The Reserve Banks will eliminate tier 0 for all FedForward[®] and FedReturn[®] Premium Daily deposit options.⁶
- The Reserve Banks will decrease per-item fees for the FedForward Premium Daily A deposit option by \$0.004 for tier 1. The Reserve Banks will decrease per-item fees for the FedForward[®] Premium Daily B deposit option by \$0.002 for tier 1. The Reserve Banks will decrease per-item fees for Premium Daily A, B, and C deposit options by \$0.003 for tier 3 and tier 4.
- The Reserve Banks will increase the Retail Payments Premium Receiver (RPPR) FedForward[®] discount by \$0.001.⁷
- The Reserve Banks will introduce 4:00 p.m. eastern time (ET) deposit deadlines for Standard FedReturn[®] and Premium FedReturn[®] and accompanying fee schedules, which include per-

⁵ The Reserve Banks evaluate and set tier assignments annually based on changes in the volume of items received by endpoints.

⁶ Tier 0 consists of financial institutions with less than 10 percent of their Reserve Bank return receipt volume deposited with the Reserve Banks by Premium Daily Fee depositors during the sample period.

⁷ For eligible customers that deposit over two million items per month.

item fees and fixed per-cash letter fees, as detailed in table 9 and 10, respectively.

- The Reserve Banks will increase per-item fees for all other Standard FedReturn[®] deadlines (9:00 p.m. ET, 1:00 a.m. ET, and 12:30 p.m. ET) and Premium FedReturn[®] deadlines (1:00 a.m. ET and 12:30 p.m. ET) by \$0.02.
- The Reserve Banks will increase per-item fees for paper/legacy services between 10 to 17 percent, as detailed in table 11.
- The Reserve Banks will increase all fees for the FedImage[®] service 10 percent, as detailed in table 12.
- The Reserve Banks will implement a fixed monthly Check 21 participation fee of \$25 per parent customer.
- The Reserve Banks will increase the per-item fee for the FedReceipt[®] Premium Delivery 8:00 a.m. ET Target by \$0.003, per item fees for the Premium Delivery 10:00 a.m. Target by \$0.002, and Premium Delivery 12:00 noon Target by \$0.001.⁸

FedACH

- The Reserve Banks will keep prices at existing levels for all existing priced FedACH products.

Fedwire Funds

- The Reserve Banks will increase the per-transfer fee for originations and receipts from \$0.820 to \$0.840 for tier 1

⁸ The 8:00 a.m. delivery target is expressed in eastern time, while the 10:00 a.m. and 12:00 noon targets are local time.

transfers, from \$0.245 to \$0.25 for tier 2 transfers, and from \$0.160 to \$0.165 for tier 3 transfers.⁹

- The Reserve Banks will increase the discounted (volume-based) per-transfer fee for originations and receipts from \$0.164 to \$0.168 for tier 1 transfers, from \$0.049 to \$0.050 for tier 2 transfers, and from \$0.032 to \$0.033 for tier 3 transfers.¹⁰

National Settlement Service (NSS)

- The Reserve Banks will keep prices at existing levels for the priced NSS products.

Fedwire Securities

- The Reserve Banks will keep prices at existing levels for the priced Fedwire Securities products.

FedLine[®] Solutions

- The Reserve Banks will increase the FedMail Fax fee from \$100 to \$150.¹¹
- The Reserve Banks will increase the FedMail Email (for customers with FedLine Web or above) fee from \$20 to \$40.¹²

⁹ Tiers are based on monthly total volume of originations and receipts. Tier 1 includes up to 14,000 transfers, tier 2 includes from 14,001 to 90,000 transfers, and tier 3 includes transfers over 90,000.

¹⁰ The tiered pricing structure is complemented by a volume-based incentive mechanism that provides discounts to customers that meet certain volume thresholds.

¹¹ Limited to installed base only.

¹² All customers with a FedMail Email (for FedLine customers) have a FedLine connection today. This service allows institution with a FedLine Web or higher solution to use FedMail Email, in addition to their FedLine solution.

- The Reserve Banks will increase the monthly fee for the legacy FedLine Direct Plus and Premier packages to \$5,500 and \$7,500, respectively. The Reserve Banks subsequently will increase prices for both packages to \$10,000 in May and \$20,000 in August.¹³
- The Reserve Banks will increase the monthly fee for Additional Legacy 256K and T1 Wide Area Network services connections to \$3,500. The Reserve Banks subsequently will increase prices for these Additional Legacy connections to \$5,000 in May and \$10,000 in August.
- The Reserve Banks will increase the monthly fees for legacy Check 21 Large File Delivery (C21 LFD) 20 percent. The Reserve Banks subsequently will increase prices 50 percent in May and 100 percent in August.¹⁴
- The Reserve Banks will update the FedComplete packages to incorporate other pricing and product changes.¹⁵

B. *Private Sector Adjustment Factor* — The imputed debt financing costs, targeted ROE, and effective tax rate are based on a U.S. publicly

¹³ The Reserve Banks will increase fees in mid-2020 for those customers who have not yet converted to new FedLine Direct network routers and circuits.

¹⁴ The monthly fees for legacy C21 LFD fee ranges from \$1,680 to \$24,870 depending on the size, speed, and location of the connection. In order to avoid compounding increases, December 2019 will be the baseline for all 2020 price increases for any connection still needing to convert.

¹⁵ FedComplete package pricing will be updated to include the Check participation fee and the 4:00 p.m. FedReturn® deadline. Additionally, the Reserve Banks will update the FedComplete Excess Volume and Receipt Surcharge to reflect the fee increase to Fedwire Origination and Receipt. FedComplete packages include a Fedwire Funds volume overage surcharge equivalent to the regular unit cost for originated items and one-tenth of the regular unit cost for received items.

traded firm market model.¹⁶ The method for calculating the financing costs in the PSAF requires determining the appropriate imputed levels of debt and equity and then applying the applicable financing rates. In this process, a pro forma balance sheet using estimated assets and liabilities associated with the Reserve Banks' priced services is developed, and the remaining elements that would exist are imputed as if these priced services were provided by a private business firm. The same generally accepted accounting principles that apply to commercial-entity financial statements apply to the relevant elements in the priced services pro forma financial statements.

The portion of Federal Reserve assets that will be used to provide priced services during the coming year is determined using information about actual assets and projected disposals and acquisitions. The priced portion of these assets is determined based on the allocation of depreciation and amortization expenses of each asset class. The priced portion of actual Federal Reserve liabilities consists of postemployment and postretirement benefits, accounts payable, and other liabilities. The priced portion of the actual net pension asset or liability is also included on the balance sheet.¹⁷

¹⁶ Data for U.S. publicly traded firms is from the Standard and Poor's Compustat® database. This database contains information on more than 6,000 U.S. publicly traded firms, which approximates information for the entirety of the U.S. market.

¹⁷ The pension assets are netted with the pension liabilities and reported as a net asset or net liability as required by ASC 715 *Compensation – Retirement Benefits*.

The equity financing rate is the targeted ROE produced by the capital asset pricing model (CAPM). In the CAPM, the required rate of return on a firm's equity is equal to the return on a risk-free asset plus a market risk premium. The risk-free rate is based on the three-month Treasury bill; the beta is assumed to be equal to 1.0, which approximates the risk of the market as a whole; and the market risk premium is based on the monthly returns in excess of the risk-free rate over the most recent 40 years. The resulting ROE reflects the return a shareholder would expect when investing in a private business firm.

For simplicity, given that federal corporate income tax rates are graduated, state income tax rates vary, and various credits and deductions can apply, an actual income tax expense is not explicitly calculated for Reserve Bank priced services. Instead, the Board targets a pretax ROE that would provide sufficient income to fulfill the priced services' imputed income tax obligations. To the extent that performance results are greater or less than the targeted ROE, income taxes are adjusted using the effective tax rate.

Capital structure. The capital structure is imputed based on the imputed funding need (assets less liabilities), subject to minimum equity constraints. Short-term debt is imputed to fund the imputed short-term

funding need. Long-term debt and equity are imputed to meet the priced services long-term funding need at a ratio based on the capital structure of the U.S. publicly traded firm market. The level of equity must meet the minimum equity constraints, which follow the FDIC requirements for a well-capitalized institution. The priced services must maintain equity of at least 5 percent of total assets and 10 percent of risk-weighted assets.¹⁸ Any equity imputed that exceeds the amount needed to fund the priced services' assets and meet the minimum equity constraints is offset by a reduction in imputed long-term debt. When imputed equity is larger than what can be offset by imputed debt, the excess is imputed as investments in Treasury securities; income imputed on these investments reduces the PSAF.

Application of the Payment System Risk (PSR) Policy to the Fedwire Funds Service. The Board's PSR policy incorporates the international standards for financial market infrastructures (FMIs) developed by the Committee on Payment and Settlement Systems and the Technical Committee of the International Organization of Securities Commissions in

¹⁸ The FDIC rule, which was adopted as final on April 14, 2014, requires that well-capitalized institutions meet or exceed the following standards: (1) total capital to risk-weighted assets ratio of at least 10 percent, (2) tier 1 capital to risk-weighted assets ratio of at least 8 percent, (3) common equity tier 1 capital to risk-weighted assets ratio of at least 6.5 percent, and (4) a leverage ratio (tier 1 capital to total assets) of at least 5 percent. Because all of the Federal Reserve priced services' equity on the pro forma balance sheet qualifies as tier 1 capital, only requirements 1 and 4 are binding. The FDIC rule can be located at https://www.fdic.gov/news/board/2014/2014-04-08_notice_dis_c_fr.pdf.

the *Principles for Financial Market Infrastructures*. The policy requires that the Fedwire Funds Service meet or exceed the applicable risk-management standards. Principle 15 states that an FMI should identify, monitor, and manage general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialize. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services. The Fedwire Funds Service does not face the risk that a business shock would cause the service to wind down in a disorderly manner and disrupt the stability of the financial system. In order to foster competition with private-sector FMIs, however, the Reserve Banks' priced services will hold an amount equivalent to six months of the Fedwire Funds Service's current operating expenses as liquid financial assets and equity on the pro forma balance sheet.¹⁹ Current operating expenses are defined as normal business operating expenses on the income statement, less depreciation, amortization, taxes, and interest on debt. Using the Fedwire Funds Service's preliminary 2020 budget, six months of current operating expenses would be \$56.0

¹⁹ This requirement does not apply to the Fedwire Securities Service. There are no competitors to the Fedwire Securities Service that would face such a requirement, and imposing such a requirement when pricing the securities services could artificially increase the cost of these services.

million. In 2020, \$41.6 million of equity was imputed to meet the FDIC capital requirements; however, an additional \$7.1 million of equity was imputed to meet the PSR policy requirement and is allocated solely to the Fedwire Funds Service.

Effective tax rate. Like the imputed capital structure, the effective tax rate is calculated based on data from U.S. publicly traded firms. The tax rate is the mean of the weighted average rates of the U.S. publicly traded firm market over the past 5 years.

Debt and equity financing. The imputed short- and long-term debt financing rates are derived from the nonfinancial commercial paper rates from the Federal Reserve Board's H.15 Selected Interest Rates release (AA and A2/P2) and the annual Merrill Lynch Corporate & High Yield Index rate, respectively. The equity financing rate is described above. The rates for debt and equity financing are applied to the priced services estimated imputed short-term debt, long-term debt, and equity needed to finance short- and long-term assets and meet equity requirements.

The 2020 PSAF is \$18.9 million, compared with \$17.8 million in 2019. The increase of \$1.1 million is attributable to a net \$0.7 million increase in the cost of capital and a \$0.7 million increase in sales tax, offset by a \$0.3 million decrease in the Board's costs. The net \$0.7 million

increase in cost of capital resulted from an incremental \$1 million increase in return on imputed equity necessary for PSR Policy compliance partially offset by a \$0.3 million decrease in the return on equity imputed to satisfy the FDIC requirements for a well-capitalized institution.

The PSAF expense of \$18.9 million, detailed in table 5, reflects \$7.9 million for capital funding, \$6.7 million for BOG expense, and \$4.4 million in sales tax expense.

As shown in table 3, 2020 total assets of \$841.2 million decreased by \$5.4 million from 2019. The net decrease in total assets reflects a \$29.7 million decrease in long-term assets partially offset by a \$24.3 million increase in short-term assets and imputed investments.

The net long-term asset decrease of \$29.7 million primarily consists of a \$23.6 million decrease in the net pension asset and a combined \$9.2 million decrease in Furniture and equipment and Leasehold improvements and long-term prepayments. The net pension asset decrease reflects lower plan contributions over the past two years, down from \$240 million in 2018 to \$180 million in 2019 and 2020, respectively. The decreases in Furniture and equipment and Leasehold improvements and long-term prepayments are mainly due to a lower allocation of Reserve Bank assets to the Federal Reserve's priced services.

The increase in the short-term assets is primarily driven by the imputed investments in Treasury securities from imputed equity required to meet FDIC capital requirements for a well-capitalized institution and to comply with the PSR policy. The remaining net increases in short-term assets reflect a \$34.1 million increase in items in process of collection resulting from relatively high balances in the value of foreign transactions offset by a \$27.5 million decrease in imputed investments in Fed Funds.

The capital structure of the 2020 pro forma balance sheet, provided in table 4, is composed of equity of \$56.0 million, or 11.4 percent of the 2020 risk weighted assets detailed in table 6, and no long-term debt. The 2020 capital structure is similar to that of 2019, which was composed of \$51.8 million of equity. The 2020 imputed equity required to fund assets and meet the publicly traded firm model capital requirements is \$31.2 million. Long-term debt of \$10.4 million was imputed at the observed market ratio of 58.4 percent. To meet the FDIC capital requirements for a well-capitalized institution, the \$10.4 million of imputed long-term debt was substituted for equity, and additional \$31.2 million equity was imputed. The resulting \$49 million total level of equity was not sufficient to satisfy the \$56.0 million equity requirement for the PSR policy requirements. An additional \$7.1 million was imputed to comply with the PSR requirement.

The net Accumulated Other Comprehensive Income loss is \$625.2 million, compared with \$624.3 million in 2019. The slight increase is primarily attributable to a higher discount rate. AOCI is in a net loss position and does not reduce the total imputed equity required to fund priced services assets or fulfill the FDIC equity requirements for a well-capitalized institution.

Table 3

Comparison of Pro Forma Balance Sheets for Budgeted Federal Reserve Priced Services^a
(millions of dollars – projected average for year)

	<u>2020</u>	<u>2019</u>	<u>Change</u>
Short-term assets			
Receivables	\$ 37.1	\$ 36.7	\$ 0.4
Materials and supplies	0.5	0.6	(0.1)
Prepaid expenses	10.8	11.1	(0.3)
Items in process of collection ²⁰	<u>129.1</u>	<u>95.0</u>	<u>34.1</u>
Total short-term assets	<u>177.5</u>	<u>143.4</u>	<u>34.1</u>
Imputed investments²¹			
Imputed investment in Treasury Securities	\$ 38.2	\$ 20.5	\$ 17.7
Imputed investment in Fed Funds	<u>225.5</u>	<u>253.0</u>	<u>(27.5)</u>
Total imputed investments	<u>263.7</u>	<u>273.5</u>	<u>(9.8)</u>
Long-term assets			
Premises ²²	\$ 111.5	\$ 104.2	\$ 7.3
Furniture and equipment	30.2	32.8	(2.6)
Leasehold improvements and long-term prepayments	81.1	87.7	(6.6)
Net pension asset	-	23.6	(23.6)
Deferred tax asset	<u>177.2</u>	<u>181.4</u>	<u>(4.2)</u>
Total long-term assets	<u>400.0</u>	<u>429.7</u>	<u>(29.7)</u>
Total assets	<u>\$ 841.2</u>	<u>\$ 846.6</u>	<u>\$ (5.4)</u>
Short-term liabilities			
Deferred credit items	\$ 354.6	\$ 348.0	\$ 6.6
Short-term debt	13.0	13.5	(0.5)
Short-term payables	<u>35.5</u>	<u>34.9</u>	<u>0.6</u>
Total short-term liabilities	<u>403.1</u>	<u>396.4</u>	<u>6.7</u>
Long-term liabilities			
Pension liability	\$ 0.1	\$ -	\$ 0.1
Long-term debt	-	-	-
Postemployment/postretirement benefits and net pension liabilities ²³	<u>382.0</u>	<u>398.4</u>	<u>(16.4)</u>
Total liabilities	<u>\$ 785.2</u>	<u>\$ 794.8</u>	<u>\$ (9.6)</u>

²⁰ Credit float, which represents the difference between items in process of collection and deferred credit items, occurs when the Reserve Banks debit the paying bank for transactions before providing credit to the depositing bank. Float is directly estimated at the service level.

²¹ Consistent with the Board's PSR policy, the Reserve Banks' priced services will hold and amount equivalent to six months of the Fedwire Funds Service's current operating expenses as liquid net financial assets and equity on the pro forma balance sheet. Six months of the Fedwire Funds Service's projected current operating expenses is \$56.0 million. In 2020, \$41.6 million of equity was imputed to meet the regulatory capital requirements and \$7.1 million of equity was imputed to satisfy PSR policy funding requirements.

²² Includes the allocation of Board of Governors assets to priced services of \$3.1 million for 2020 and \$2.9 million for 2019.

²³ Includes the allocation of Board of Governors liabilities to priced services of \$0.8 million for 2020 and \$0.8 million for 2019.

Equity ²⁴	\$ 56.0	\$ 51.8	\$ 4.2
Total liabilities and equity	<u>\$ 841.2</u>	<u>\$ 846.6</u>	<u>\$ (5.4)</u>

^a Calculations in this table and subsequent PSAF tables may be affected by rounding.

²⁴ Includes an accumulated other comprehensive loss of \$625.2 million for 2020 and \$624.3 million for 2019, which reflects the ongoing amortization of the accumulated loss in accordance with ASC 715. Future gains or losses, and their effects on the pro forma balance sheet, cannot be projected. See table 5 for calculation of required imputed equity amount.

Table 4
Imputed Funding for Priced-Services Assets
(millions of dollars)

	2020	2019
A. Short-term asset financing		
Short-term assets to be financed		
Receivables	\$ 37.1	\$ 36.7
Materials and supplies	0.5	0.6
Prepaid expenses	10.8	11.1
Total short-term assets to be financed	<u>\$ 48.4</u>	<u>\$ 48.4</u>
Short-term payables	35.5	34.9
Net short-term assets to be financed	<u>\$ 13.0</u>	<u>\$ 13.5</u>
Imputed short-term debt financing ²⁵	\$ 13.0	\$ 13.5
B. Long-term asset financing		
Long-term assets to be financed		
Premises	\$ 111.5	\$ 104.2
Furniture and equipment	30.2	32.8
Leasehold improvements and long-term prepayments	81.1	87.7
Net pension asset	-	23.6
Deferred tax asset	177.2	181.4
Total long-term assets to be financed	<u>\$ 400.0</u>	<u>\$ 429.7</u>
Postemployment/postretirement benefits and net pension liabilities	382.0	398.4
Net long-term assets to be financed	<u>\$ 17.8</u>	<u>\$ 31.3</u>
Imputed long-term debt ²⁰	\$ -	\$ -
Imputed equity ²⁰	56.0	51.8
Total long-term financing	<u>\$ 56.0</u>	<u>\$ 51.8</u>

²⁵ Imputed short-term debt financing is computed as the difference between short-term assets and short-term liabilities. As presented in table 5, the financing costs of imputed short-term debt, imputed long-term debt and imputed equity are the elements of cost of capital, which contribute to the calculation of the PSAF.

Table 5
Derivation of the 2020 and 2019 PSAF
(dollars in millions)

	2020		2019	
	Debt	Equity	Debt	Equity
A. Imputed long-term debt and equity				
Net long-term assets to finance	\$ 17.8	\$ 17.8	\$ 31.3	\$ 31.3
Capital structure observed in market	58.4%	41.6%	58.3%	41.7%
Pre-adjusted long-term debt and equity	\$ 10.4	\$ 7.4	\$ 18.2	\$ 13.1
Equity adjustments ²⁶ :				
Equity to meet capital requirements	-	49.0	-	51.8
Adjustment to debt and equity funding given capital requirements ²⁷	(10.4)	10.4	(18.2)	18.2
Adjusted equity balance	-	17.8	-	31.3
Equity to meet capital requirements ²⁸	-	31.2	-	20.5
Total imputed long-term debt and equity	\$ -	\$ 49.0	\$ -	\$ 51.8
B. Cost of capital				
Elements of capital costs				
Short-term debt ²⁹	\$ 13.0 x	2.3% = \$ 0.3	\$ 13.5 x	2.3% = \$ 0.3
Long-term debt ²⁹	- x	4.0% = -	- x	3.9% = -
Equity ³⁰	49.0 x	13.3% = 6.6	51.8 x	13.3% = 6.8
		\$ 6.9		\$ 7.1
C. Incremental cost of PSR policy				
Equity to meet policy	\$ 7.1 x	13.5% = \$ 1.0	\$ - x	13.3% = \$ -
D. Other required PSAF costs				
Sales taxes	\$ 4.4		\$ 3.7	
Board of Governors expenses		6.7		7.0
		11.1		10.7
		\$ 18.9		\$ 17.8
E. Total PSAF				
As a percent of assets		2.2%		2.1%
As a percent of expenses		3.4%		3.3%
F. Tax rates		22.1%		22.2%

²⁶ If minimum equity constraints are not met after imputing equity based on the capital structure observed in the market, additional equity is imputed to meet these constraints. The long-term funding need was met by imputing long-term debt and equity based on the capital structure observed in the market (see tables 4 and 6). In 2020, the amount of imputed equity met the minimum equity requirements for risk-weighted assets.

²⁷ Equity adjustment offsets are due to a shift of long-term debt funding to equity in order to meet FDIC capital requirements for well-capitalized institutions.

²⁸ Additional equity in excess of that needed to fund priced services assets is offset by an asset balance of imputed investments in treasury securities.

²⁹ Imputed short-term debt and long-term debt are computed at table 4.

³⁰ The 2020 ROE is equal to a risk-free rate plus a risk premium (beta * market risk premium). The 2020 after-tax CAPM ROE is calculated as 2.16% + (1.0 * 8.34%) = 10.50%. Using a tax rate of 22.1%, the after-tax ROE is converted into a pretax ROE, which results in a pretax ROE of (10.50% / (1-22.1%)) = 13.48%. Calculations may be affected by rounding.

Table 6
 Computation of 2020 Capital Adequacy for Federal Reserve Priced Services
 (dollars in millions)

	<u>Assets</u>	<u>Risk Weight</u>	<u>Weighted Assets</u>
Imputed investments:			
1-Year Treasury securities ³¹	\$ 38.2	-	\$ -
Federal funds ³²	225.5	0.2	45.1
Total imputed investments	<u>263.7</u>		<u>45.1</u>
Receivables	\$ 37.1	0.2	\$ 7.4
Materials and supplies	0.5	1.0	0.5
Prepaid expenses	10.8	1.0	10.8
Items in process of collection	129.1	0.2	25.8
Premises	111.5	1.0	111.5
Furniture and equipment	30.2	1.0	30.2
Leasehold improvements and long-term prepayments	81.1	1.0	81.1
Deferred tax asset	<u>177.2</u>	1.0	<u>177.2</u>
Total	<u>\$ 841.2</u>		<u>\$ 489.7</u>
Imputed equity:			
Capital to risk-weighted assets	11.4%		
Capital to total assets	6.7%		

³¹ If minimum equity constraints are not met after imputing equity based on all other financial statement components, additional equity is imputed to meet these constraints. Additional equity imputed to meet minimum equity requirements is invested solely in Treasury securities. The imputed investments are similar to those for which rates are available on the Federal Reserve's H.15 statistical release, which can be located at <http://www.federalreserve.gov/releases/h15/data.htm>.

³² The investments are imputed based on the amounts arising from the collection of items before providing credit according to established availability schedules.

C. *Check Service* — Table 7 shows the 2018 actual, 2019 estimated, and 2020 budgeted cost-recovery performance for the commercial check service.

Table 7

Check Service Pro Forma Cost and Revenue Performance					
(dollars in millions)					
YEAR	1	2	3	4	5
	REVENUE	TOTAL EXPENSE	NET INCOME (ROE) [1-2]	TARGETED ROE	RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2018 (actual)	\$132.9	\$127.8	\$5.1	\$1.5	102.7%
2019 (estimate)	126.7	121.6	5.2	1.5	102.9%
2020 (budget)	119.4	114.8	4.6	1.3	102.8%

1. *2019 Estimate* — The Reserve Banks estimate that the check service will recover 102.9 percent of total expenses and targeted ROE, compared with a 2019 budgeted recovery rate of 101.9 percent.

Through August, total commercial forward and total commercial return check volumes were 8.1 percent and 7.1 percent lower, respectively, than they were during the same period last year. Consistent with anticipated fourth-quarter declines, for full-year 2019, the Reserve Banks estimate that their total forward check volume will decline 7.8 percent (compared with a budgeted decline of 7.6 percent) and their total return check volume will decline 6.6 percent (compared with a budgeted decline of 7.7 percent) from 2018 levels.³³ The Reserve Banks expect that check volumes will continue to

³³ Total Reserve Bank forward check volumes are expected to be 4.4 billion in 2019. Total Reserve Bank return check volumes are expected to be 27.1 million in 2019.

decline, although uncertainty remains as to the rate of decline over the long term. In particular, the Reserve Banks' check volumes are expected to decrease because of competitive pressures in the check-clearing market, and substitution away from checks to other payment instruments. While these volume declines will affect budgeted total revenue, the Reserve Banks estimate that total expenses will also be lower given the decline in those expenses directly correlated with volumes as well as the continued realization of operational efficiencies. These factors have allowed for close alignment between budgeted and estimated 2019 cost recovery.

2. *2020 Pricing* — The Reserve Banks expect the check service to recover 102.8 percent of total expenses and targeted ROE in 2020. The Reserve Banks project revenue to be \$119.4 million, a decline of 5.8 percent from the 2019 estimate. This decline is driven in part by an anticipated accelerating decline in the overall number of checks written, as well as by competition from correspondent banks, aggregators, and direct exchanges.³⁴ Total expenses for the check service are projected to be \$114.8 million, a decrease of \$6.8 million, or 5.6 percent, from 2019 expenses, primarily

³⁴ The Reserve Banks estimate that total commercial forward check volumes in 2019 will decline 8.5 percent, to 4.0 billion, and total commercial return check volumes will decline 8.5 percent, to 24.8 million in 2019.

because of reduced operating costs, including cost savings associated with the Reserve Banks' customer support services.

The Reserve Banks will introduce a fixed participation fee, which will be charged to any customer that receives FedReceipt volume on a monthly basis. In light of ongoing volume declines, the participation fee is intended to support revenue stability by increasing the proportion of fixed to variable fees. Additionally, this fee introduction aligns the check service with other priced services that offer similar monthly participation fees, such as FedACH and the Fedwire Funds Service.

The Reserve Banks evaluate and set tier assignments annually based on changes in the volume of items received by endpoints. In 2020, the Reserve Banks will reassign the tier placement of 238 endpoints currently in tiers 1-4 to another tier.³⁵ In addition, the Reserve Banks will eliminate tier 0 for all Forward and Return Premium Daily deposit options, and reassign all remaining tier 0 customers.³⁶ This change is intended to reflect the fact that the Reserve Banks now have sufficient volume to appropriately assign the remaining 1,130 endpoints from tier 0 into tiers 1-4. In response to feedback

³⁵ The tiers for 2019 are available at <https://www.frb services.org/resources/fees/check-2019.html>.

³⁶ Tier 0 was introduced as part of the Reserve Banks' 2016 restructured FedForward and FedReturn fee schedules and is composed of routing numbers for which the Reserve Banks currently receive little to no volume from the specified subset of Reserve Bank customers (and which therefore cannot currently be assigned to the other tiers with sufficient predictability). Tier 0 was only available for FedForward and Return Premium Daily deposit options.

from customers, the Reserve Banks will also evaluate and set tier assignments every other year instead of annually, to provide more certainty and price stability to the industry. As a result, the Reserve Banks will next reevaluate and set tier assignments in 2022.³⁷

Based on the 2020 tier assignments and the elimination of tier 0, the Reserve Banks will include changes to FedForward Premium Daily Fees and the Retail Payments Premium Receiver (RPPR) discount structure. The Reserve Banks will lower the FedForward Premium Daily Fee A per item fees by \$0.004 for tier 1, lower the FedForward Premium Daily Fee B per item fees by \$0.002 for tier 1, and lower the FedForward Premium Daily Fee A, B, and C per item fees by \$0.003 for tiers 3 and 4. The Reserve Banks also will include an increase to the RPPR discount of \$0.001 for eligible customers that deposit over two million items per month. Table 8 shows the 2020 FedForward Premium Daily fees.

³⁷ The tiers for 2020 are available at <https://www.frb services.org/resources/fees/check-2020.html>.

Table 8

FedForward Premium Daily Deposit			
<i>Applicable to Premium Daily Fee A, Premium Daily Fee B, and Premium Daily Fee C</i>			
<i>Deposit Deadline of 5:00 AM EST M-F</i>			
TIER ³⁸	PREMIUM A	PREMIUM B	PREMIUM C
0	N/A	N/A	N/A
1	\$0.002	\$0.002	\$0.002
2	\$0.014	\$0.012	\$0.010
3	\$0.022	\$0.020	\$0.018
4	\$0.036	\$0.034	\$0.032
5	\$0.200	\$0.200	\$0.200
<i>Deposit Deadline of 12:00 PM EST M-F</i>			
0	N/A	N/A	N/A
1	\$0.012	\$0.012	\$0.012
2	\$0.024	\$0.022	\$0.020
3	\$0.032	\$0.030	\$0.028
4	\$0.046	\$0.044	\$0.042
5	\$0.200	\$0.200	\$0.200

In response to customer demand for intraday return options to match other clearing option capabilities, the Reserve Banks will introduce a new 4:00 PM ET FedReturn® deposit deadline. The deadline will accelerate the speed of payments by providing additional options for paying banks to return items earlier. The Reserve Banks will increase the tier pricing for the 9:00 PM ET, 1:00 AM ET, and 12:30 PM ET FedReturn deposit deadlines. Table 9 lists the fees for the Standard FedReturn® product, inclusive of current and new deposit deadlines. Table 10 lists the fees for the Premium FedReturn® product, inclusive of current and new deposit deadlines.

³⁸ Tier 5 for FedForward Daily Deposit is also referred to as Substitute Check Endpoints.

Table 9

Standard FedReturn Image Cash Letter				
TIER ³⁹	4:00 PM ET	9:00 PM ET	1:00 AM ET	12:30 PM ET
1	\$0.120	\$0.170	\$0.470	\$0.170
2	\$0.180	\$0.230	\$0.530	\$0.230
3	\$0.590	\$0.640	\$0.940	\$0.640
4	\$0.790	\$0.840	\$1.140	\$0.840
5	\$1.000	\$1.050	\$1.350	\$1.050
6	\$1.500	\$1.500	\$1.500	\$1.500
Cash Letter	\$4.50	\$4.50	\$6.50	\$6.50

Table 10

Premium FedReturn Image Cash Letter			
TIER ³⁹	4:00 PM ET	1:00 AM ET	12:30 PM ET
0	N/A	N/A	N/A
1	\$0.020	\$0.070	\$0.090
2	\$0.070	\$0.120	\$0.140
3	\$0.490	\$0.540	\$0.560
4	\$0.690	\$0.740	\$0.760
5	\$0.900	\$0.950	\$0.970
6	\$1.500	\$1.500	\$1.500
Daily Fixed Fee	\$400.00	\$400.00	\$400.00

The Reserve Banks will increase to the per-item fee for all paper-related products, as well as large-dollar return item notification (LDRIN), and returns reclear services by 10 to 17 percent.⁴⁰ The Reserve Banks will increase all FedImage® fees 10 percent. The Reserve Banks will continue

³⁹ Tier 5 for FedReturn Daily Deposit is also referred to as PDF Endpoints. Tier 6 for FedReturn Daily Deposit is also referred to as Substitute Check Endpoints.

⁴⁰ LDRIN is a service in which the Reserve Banks, at the payor bank's request, notifies the bank of first deposit (BOFD) that an item of \$5,000 or more is being returned to them, to satisfy the payor bank's Regulation CC requirement. Returns reclear is a service in which the Reserve Banks, at the BOFD's request, will make a second attempt to clear a check that has been returned during the first clearing attempt.

increasing fees to encourage depositors to shift volume away from legacy paper-related products in light of today's electronic check-processing environment. Table 11 and 12 show these pricing changes.

Table 11

Paper Check Forward and Return Collection		
PAPER SERVICES	FIXED FEE	PER ITEM FEE
Canadian Items – U.S. Funds	\$15.00	\$5.50
Canadian Items – Canadian Funds	\$15.00	\$5.50
Canadian Cash Letter Correction Fee	-	\$22.00
Canadian Amount Encoding	-	\$1.65
Foreign Items – GBP and Euro	\$15.00	\$22.00
Foreign Items – All Other Items	\$15.00	\$22.00
Foreign Items – Collection Items	\$15.00	\$88.00
Mixed Forward Paper Deposits	\$15.00	\$4.00
LDRIN – FedLine Web access solution	-	\$4.00
LDRIN – Telephone	-	\$22.00
LDRIN – Physical Item	-	\$28.00
Returns Item Reclear – Level 1	\$10.00	\$0.70
Returns Item Reclear – Level 2	\$10.00	\$0.80
Returns Item Reclear – Level 3	\$10.00	\$0.90
Returns Item Reclear – Level 4	\$10.00	\$1.00
Canadian Item – Return	-	\$16.50
Foreign Item – Return	-	\$44.00
Mixed Return Paper Deposits	\$15.00	\$7.00
Return Item Qualification	-	\$8.25

Table 12

FedImage and Electronic Check Services and Fees		
IMAGE ARCHIVE	FIXED FEE	PER ITEM FEE
Image Capture + 7 business day archive	\$6.60	\$0.010
Image Capture On-Us Surcharge	-	\$0.0233
30 business day archive	-	\$0.0012
60 business day archive	-	\$0.0014
7-year archive / 11-year archive	-	\$0.0022
Dual archive (Transition period up to 120 days)	-	\$0.0013
Extended dual archive (More than 120 days)	-	\$0.0133
Back File Conversion	\$4.70	\$0.0133
Electronic On-Us Service	\$4.70	\$0.0133
<i>Extended RAID Storage</i>		
61 days to 6 months	-	\$0.0011
61 days to 12 months	-	\$0.0026
61 days to 24 months	-	\$0.0067
IMAGE RETRIEVALS		
Retrievals to view via FedLine Web® inquiry	-	\$0.4700
<i>Retrievals to email via FedLine Web</i>		
Request via FedLine Web inquiry	-	\$0.4700
Recurring request	-	\$0.4700
Image Access and Retrievals through a Gateway	-	\$0.4700
Subscription Retrievals	-	\$0.0029
Manual FedImage Requests (requests performed by FRB staff)	-	\$8.0000
IMAGE DELIVERY		
<i>Physical Media</i>		
CD-ROM Select Accounts Service – RAID	\$20.00/CD-ROM	\$0.0210
CD-ROM – Tape	\$20.00/CD-ROM	\$0.1300
TRUNCATION		
Image Enhanced Truncation	\$7.25	\$0.0120
Return Item Retrieval - FedLine	-	\$1.4000

The Reserve Banks will increase the per-item fee for the FedReceipt®

Premium Delivery 8:00 a.m. ET Target by \$0.003 to \$0.026, for the 10:00

a.m. Target by \$0.002 to \$0.017, and for the 12:00 noon Target by \$0.001 to

\$0.012.⁴¹ The fee increases are intended to maintain cost recovery of the Premium Delivery service in light of declining check volume.

The primary risks to the Reserve Banks’ ability to achieve budgeted 2020 cost recovery for the check service include greater-than-expected declines in check volume due to the general reduction in check writing and increased competition from correspondent banks, aggregators, and direct exchanges, which would result in lower-than-anticipated revenue.

D. *FedACH Service* — Table 13 shows the 2018 actual, 2019 estimate, and 2020 budgeted cost-recovery performance for the commercial FedACH service.

Table 13

FedACH Service Pro Forma Cost and Revenue Performance					
(dollars in millions)					
YEAR	1	2	3	4	5
	REVENUE	TOTAL EXPENSE	NET INCOME (ROE) [1-2]	TARGETED ROE	RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2018 (actual)	\$149.7	\$149.1	\$0.6	\$1.9	99.2%
2019 (estimate)	152.7	153.1	-0.4	1.9	98.6%
2020 (budget)	157.6	155.3	2.3	1.9	100.3%

1. *2019 Estimate* — The Reserve Banks estimate that the FedACH service will recover 98.6 percent of total expenses and targeted ROE, compared with a 2019 budgeted recovery rate of 101.3 percent. Through August, FedACH commercial origination and receipt volume was

⁴¹ FedReceipt services consist of the electronic presentment of an image cash letter to the paying bank that consists of all forward items deposited electronically. The 8:00 a.m. delivery target is expressed in eastern time, while the 10:00 a.m. and 12:00 noon targets are local time.

5.4 percent higher than it was during the same period last year. For full-year 2019, the Reserve Banks estimate that FedACH commercial origination and receipt volume will increase 5.8 percent from 2018 levels, compared with a 2019 budgeted increase of 3.3 percent. However, investment costs associated with a multiyear technology initiative to modernize the FedACH processing platform continue to drive the overall underrecovery rate. Although FedACH is estimated to not fully recover its costs in 2019, the Reserve Banks are expected to fully recover FedACH costs following the finalization of the FedACH technology modernization project.

2. 2020 Pricing — The Reserve Banks expect the FedACH service to recover 100.3 percent of total expenses and targeted ROE in 2020. FedACH commercial origination and receipt volume is projected to grow 4.2 percent, which is expected to contribute to an increase of \$4.9 million in total revenue from the 2019 estimate. Total expenses are projected to increase \$2.2 million from 2019 expenses, primarily because of testing and implementation costs associated with the introduction of the new FedACH technology platform, which is now expected in 2020.

The Reserve Banks will not change fees for existing FedACH priced services. This is consistent with a multiyear strategy of providing price

stability for customers in light of ongoing investments to upgrade the FedACH processing platform.

The primary risks to the Reserve Banks’ ability to achieve budgeted 2020 cost recovery for the FedACH service are unanticipated cost overruns associated with the FedACH technology modernization project and unanticipated volume reductions.

E. *Fedwire Funds and National Settlement Services* — Table 14 shows the 2018 actual, 2019 estimate, and 2020 budgeted cost-recovery performance for the Fedwire Funds and National Settlement Services.

Table 14

Fedwire Funds and National Settlement Services Pro Forma Cost and Revenue Performance (dollars in millions)					
YEAR	1 REVENUE	2 TOTAL EXPENSE	3 NET INCOME (ROE) [1-2]	4 TARGETED ROE	5 RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2018 (actual)	\$132.4	\$123.6	\$8.8	\$1.5	105.8%
2019 (estimate)	136.4	131.6	4.8	1.6	102.4%
2020 (budget)	139.9	140.0	-0.1	2.4	98.2%

1. *2019 Estimate* — The Reserve Banks estimate that the Fedwire Funds and National Settlement Services will recover 102.4 percent of total expenses and targeted ROE, compared with a 2019 budgeted recovery rate of 100.5 percent. Through August, Fedwire Funds Service online volume was 4.0 percent higher than it was during the same period last year. For full-year 2019, the Reserve Banks estimate that Fedwire Funds Services online

volume will increase 4.5 percent from 2018 levels, compared with the 2.1 percent volume increase that had been budgeted. Through August, the National Settlement Service (NSS) settlement file volume was 4.8 percent lower than it was during the same period last year, and settlement entry volume was 4.2 percent lower. For the full year, the Reserve Banks estimate that settlement file volume will decrease 5.0 percent (slightly more than the budgeted decrease of 3.5 percent) and settlement entry volume will decrease 4.0 percent from 2018 levels (compared with a budgeted 3.0 percent decrease).

2. 2020 Pricing — The Reserve Banks expect the Fedwire Funds and National Settlement Services to recover 98.2 percent of total expenses and targeted ROE. Revenue is projected to be \$139.9 million, an increase of 2.6 percent from the 2019 estimate. The Reserve Banks project total expenses to be roughly \$8.4 million higher than 2019 expenses, primarily reflecting investments in initiatives to improve resiliency and operational functionality.

The Reserve Banks will increase the per-transfer fee for originations and receipts from \$0.820 to \$0.840 for tier 1 transfers, from \$0.245 to \$0.250 for tier 2 transfers, and from \$0.160 to \$0.165 for tier 3 transfers.⁴² Correspondingly, the discounted per-transfer fee for originations and

⁴² Tiers are based on monthly total volume of originations and receipts. Tier 1 includes up to 14,000 transfers, Tier 2 includes from 14,001 to 90,000 transfers, and Tier 3 includes transfers over 90,000.

receipts will increase from \$0.164 to \$0.168 for tier 1 transfers, from \$0.049 to \$0.050 for tier 2 transfers, and from \$0.032 to \$0.033 for tier 3 transfers.⁴³

The Reserve Banks will increase the per-transfer fee in order to offset an anticipated decline in revenue due to a large Fedwire Funds participant's upcoming transition of its transfer origination activity off the Fedwire Funds Service, which is set to occur in 2020. This shift in volume is coupled with ongoing project costs associated with resiliency and operational objectives and increased investments in System technology infrastructure. The price increase has been structured to affect tier 3 (that is, high-volume) customers proportionally more than lower-volume customers. The structure was chosen because the ongoing project costs incurred by the Fedwire Funds Service are expected to be of greater benefit to tier 3 customers. Overall Fedwire Funds participants will experience an average price increase of 3.7 percent.⁴⁴

The Reserve Banks will not change NSS fees for 2020.

⁴³ The incentive discounts apply to the volume that exceeds 60 percent of a customer's historic benchmark volume. Historic benchmark volume is based on a customer's average daily activity over the previous five calendar years. If a customer has fewer than five full calendar years of previous activity, its historic benchmark volume is based on its daily activity for as many full calendar years of data as are available.

⁴⁴ The average price impact (increase) reflects both the price changes as well as an overall expected increase in the average benchmark volume required to receive discount pricing based on historic observed increases in customer benchmark volume year over year.

There are three primary risks to the Reserve Banks' ability to achieve budgeted 2020 cost recovery for these services. First, the Fedwire Funds Service could experience a potential overrun in costs from ongoing technology initiatives to improve resiliency and operational functionality. Second, the services could experience lower-than-expected volume related to unforeseen market trends. Finally, the Fedwire Funds Service is reevaluating its current resource commitments and portfolio goals in order to better support any necessary strategic and development work related to emerging Systemwide initiatives, in addition to revisiting project implementation timelines in response to industry feedback.⁴⁵ As a result, the Fedwire Funds Service future resource and project costs may shift and this may affect 2020 cost recovery.

F. *Fedwire Securities Service* — Table 15 shows the 2018 actual, 2019 estimate, and 2020 budgeted cost-recovery performance for the Fedwire Securities Service.⁴⁶

⁴⁵ In response to industry feedback, the Federal Reserve Banks have decided to put on hold Phase 1 of the Fedwire Funds Service's ISO 20022 migration strategy (originally scheduled for November 2020). The Federal Reserve will provide an update regarding its implementation plans after engaging with key stakeholders to reassess the Fedwire Funds Service's migration strategy. See official press release for additional details (<https://frbsecurities.org/news/press-releases/092319-fedwire-funds-migration-iso20022-messages.html>).

⁴⁶ The Reserve Banks provide transfer services for securities issued by the U.S. Treasury, federal government agencies, government-sponsored enterprises, and certain international institutions. The priced component of this service, reflected in this memorandum, consists of revenues, expenses, and volumes associated with the transfer of all non-Treasury securities. For Treasury securities, the U.S. Treasury assesses fees for the securities transfer component of the service. The Reserve Banks assess

Table 15

Fedwire Securities Service Pro Forma Cost and Revenue Performance					
(dollars in millions)					
YEAR	1	2	3	4	5
	REVENUE	TOTAL EXPENSE	NET INCOME (ROE) [1-2]	TARGETED ROE	RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2018 (actual)	\$27.5	\$27.5	\$0.0	\$0.3	98.7%
2019 (estimate)	26.6	27.1	-0.5	0.3	96.8%
2020 (budget)	26.1	26.2	-0.1	0.3	98.6%

1. *2019 Estimate* — The Reserve Banks estimate that the Fedwire Securities Service will recover 96.8 percent of total expenses and targeted ROE, compared with a 2019 budgeted recovery rate of 95.1 percent. The Reserve Banks estimate revenue to be \$26.6 million, an increase of 0.8 percent from the 2019 budget. Total expenses are projected to be \$27.1 million for full-year 2019, a decrease of 1.5 percent from the 2019 budget.

Through August, Fedwire Securities Service online agency transfer volume was 6.6 percent lower than it was during the same period last year. For full-year 2019, the Reserve Banks estimate that Fedwire Securities Service online agency transfer volume will decline 11.1 percent from 2018 levels, compared with a budgeted decline of 4.7 percent. This decrease in online agency transfer volume primarily reflects JP Morgan Chase’s (JPMC) exiting the broker-dealer services business, which resulted in Bank of New York Mellon (BNYM) generally serving as the sole clearing bank for

a fee for the funds settlement component of a Treasury securities transfer; this component is not treated as a priced service.

government securities. Activity between JPMC and BNYM that had previously settled over the Fedwire Securities Service is now concentrated within BNYM. The significant decline in agency transfer volume realized from JPMC's exit was partially offset by a reorganization of BNYM's broker-dealer activity and non-broker-dealer activity into separate securities accounts. This reorganization resulted in transfer activity that was previously conducted on BNYM's books shifting to the Fedwire Securities Service. The Reserve Banks do not expect that there will be further significant changes in 2020 in online agency transfer volume related to the JPMC exit.

For full-year 2019, volumes for the Fedwire Securities' two largest revenue-generating services – account maintenance and issue maintenance – are expected to decline from 2018 levels. Through August, account maintenance volume was 2.8 percent lower than it was during the same period last year. For full-year 2019, the Reserve Banks estimate that account maintenance volume will decline 2.8 percent from 2018 levels, compared with a budgeted decline of 5.8 percent. The account maintenance volume decline is largely the result of joint custody account closures. Through August, the number of agency issues maintained was 11.8 percent lower than it was during the same period last year. For full-year 2019, the Reserve Banks estimate that the number of agency issues maintained will

decline 11.9 percent from 2018 levels, compared with a budgeted decline of 19.7 percent.

2. *2020 Pricing* — The Reserve Banks expect the Fedwire Securities Service to recover 98.6 percent of total expenses and targeted ROE in 2020. Revenue is projected to be \$26.1 million, a decrease of 1.9 percent from the 2019 estimate. The Reserve Banks also project that 2020 expenses will remain relatively flat, decreasing by \$0.9 million from the 2019 estimate. Significant drivers of 2020 operating costs include investments to advance initiatives to improve resiliency and operational functionality.

The Reserve Banks will not change Fedwire Securities Service fees for 2020. This is largely the result of a stable near-term volume outlook across Fedwire Securities' core products. Relevant cost drivers include ongoing project costs associated with resiliency and operational objectives and increased Systemwide investment in technology infrastructure. Of particular note, however, operating costs for the Fedwire Securities Service are expected to decrease in 2021, primarily due to Fedwire Securities Modernization Program-related costs being fully amortized.

The Reserve Banks project that online agency transfer volume will remain relatively flat, with a slight decrease of 1.4 percent in 2020. As interest rates decline, an expected increase in refinancing activity will likely

lead to higher mortgage-backed securities (MBS) issuance and a corresponding higher level of online MBS transfers. Conversely, agency debt transfers will likely decrease since the Federal Housing Finance Agency (FHFA) has mandated a decline in government-sponsored enterprise retained portfolios. Thus, it is expected that there will be no significant volume changes in this category for 2020.

The volume of accounts maintained will likely decrease 3.7 percent, and the volume of agency issues maintained will likely decrease 0.5 percent.⁴⁷ Account maintenance volume is expected to continue to decline in 2020 because of ongoing joint custody account closures.

The primary risk to the Reserve Banks' ability to achieve budgeted 2020 cost recovery for these services is a potential overrun in costs from ongoing technology initiatives to improve resiliency and operational functionality or lower-than-expected volume related to unforeseen market trends.

G. FedLine Solutions — The Reserve Banks charge fees for the electronic connections that depository institutions use to access priced services and allocate the costs and revenues associated with this electronic

⁴⁷ The online transfer fee, monthly account maintenance fee, and monthly issue maintenance fee accounted for more than 94 percent of total Fedwire Securities Service revenue through August 2019.

access to the priced services.⁴⁸ There are currently six FedLine channels through which customers can access the Reserve Banks' priced services: FedMail, FedLine Exchange, FedLine Web, FedLine Advantage, FedLine Command, and FedLine Direct.⁴⁹ The Reserve Banks bundle these channels into eleven FedLine packages, described below, that are supplemented by a number of premium (or à la carte) access and accounting information options. In addition, the Reserve Banks offer FedComplete packages, which are bundled offerings of FedLine connections and a fixed number of FedACH, Fedwire Funds, and Check 21-enabled transactions.

Eight attended access packages offer manual access to critical payment and information services via a web-based interface. The FedMail package provides access to basic information services via email, while the two FedLine Exchange packages are designed to provide certain services, such as the E-Payments Routing Directory, to customers that otherwise do not use FedLine for any payment services. The two FedLine Web packages offer online attended access to a range of services, including cash services, FedACH information services, and Check services. Three FedLine Advantage packages expand upon the FedLine Web packages and offer

⁴⁸ FedLine Solutions provide customers with access to Reserve Bank priced services. As such, FedLine costs and revenue are allocated to the Reserve Banks' priced services on an expense ratio basis.

⁴⁹ FedMail, FedLine Exchange, FedLine Web, FedLine Advantage, FedLine Command, and FedLine Direct are registered trademarks of the Federal Reserve Banks.

attended access to critical transactional services: FedACH, Fedwire Funds, and Fedwire Securities.

Three unattended access packages are computer-to-computer, Internet Protocol (IP)-based interfaces. The FedLine Command package offers an unattended connection to FedACH as well as to most accounting information services. The two remaining options are FedLine Direct packages, which allow for unattended connections at multiple connection speeds to Check, FedACH, Fedwire Funds, and Fedwire Securities transactional and information services and to most accounting information services.⁵⁰

In 2020, the Reserve Banks will increase the monthly fees for legacy FedLine Direct (FLD) Plus and Premier, Additional Legacy 256K and T1 Wide Area Network (WAN) services, and Check 21 Large File Delivery (C21 LFD). The fee for legacy FLD Plus (Legacy 256K) package will increase by \$1,500, from \$4,000 to \$5,500, and FLD Premier (Legacy T1) will increase by \$700, from \$6,800 to \$7,500. The Reserve Banks also will increase the à la carte monthly fee for the Additional Legacy 256K WAN by \$1,000, from \$2,500 to \$3,500 and for the Additional Legacy T1 WAN by

⁵⁰ In 2019, the Reserve Banks began offering Check 21 Large File Delivery services as part of modernized FedLine Direct Plus and FedLine Direct Premier connections.

\$300, from \$3,200 to \$3,500. In addition, the Reserve Banks will increase the C21 LFD fee by 20 percent.⁵¹ Starting in mid-2020 the Reserve Banks will include additional fee increases for these packages, as shown in table 16, to encourage customers to move to more modern and secure technology that meets industry standards.⁵² As previously announced, the Reserve Banks intend to sunset legacy FLD and C21 LFD services after all customers have converted to the new solution.

Table 16 provides a summary of the services and 2020 pricing for FLD and C21 LFD services:

Table 16

FedLine Direct and Check 21 Large File Delivery Legacy Price Increases				
SERVICES	2019 MONTHLY FEE	JANUARY 1, 2010 MONTHLY FEE	FEE STRUCTURE	
			MAY 1, 2020 MONTHLY FEE	AUGUST 1, 2020 MONTHLY FEE
FedLine Direct Plus (Legacy 256K)	\$4,000	\$5,500 (+37.5%)	\$10,000 (+150.0%)	\$20,000 (+400.0%)
FedLine Direct Premier (Legacy T1)	\$6,800	\$7,500 (10.3%)	\$10,000 (+47.1%)	\$20,000 (+194.1%)
Additional Legacy 256K WAN Connection	\$2,500	\$3,500 (+40.0%)	\$5,000 (+100.0%)	\$10,000 (+300.0%)
Additional Legacy T1 WAN Connection	\$3,200	\$3,500 (+9.4%)	\$5,000 (+56.3%)	\$10,000 (+212.5%)
Check 21 Large File Delivery ⁵³	Various	+20.0%	+50.0% (from Dec 2019 fee)	+100.0% (from Dec 2019 fee)

⁵¹ The monthly fees for legacy C21 LFD fee ranges from \$1,680 to \$24,870 depending on the size, speed, and location of the connection. In order to avoid compounding increases, December 2019 will be the baseline for all 2020 price increases for any connection still needing to convert.

⁵² The Reserve Banks will increase fees further in mid-2020 for those customers who have not yet converted to newer FedLine Direct network routers and circuits.

⁵³ To avoid compounding increases, the fee as of December 2019 will serve as the baseline for all 2020 price increases for any connection still needing to convert.

In addition, the Reserve Banks will increase the price for FedMail Fax and FedMail Email (for customers with FedLine Web or above).⁵⁴ FedMail Fax will increase by \$50, from \$100 to \$150. Additionally, FedMail Email (for customers with FedLine Web or above) will increase by \$20, from \$20 to \$40. The price increases to FedMail Fax and FedMail Email are intended to move customers to more secure and contemporary solutions.

The Reserve Banks will also update the existing FedComplete 100 and 200 (Plus and Premier) packages to incorporate other pricing and product changes.⁵⁵ Although the Reserve Banks are not making changes to package fees, the content of the packages is being updated to reflect individual 2020 pricing and product changes. Specifically, the Reserve Banks will add the 2020 Check participation fee and the 4:00 p.m. FedReturn® deadline to FedComplete packages. The Reserve Banks will update the FedComplete Excess Volume and Receipt Surcharge to reflect the fee increase to Fedwire Origination and Receipt.

The Reserve Banks estimate that the price changes will result in a 2.9 percent average price increase for FedLine customers.

⁵⁴ FedMail Email is only available to FedLine Web, Advantage, Command, and Direct customers.

⁵⁵ FedComplete packages bundle certain payment services and are designed for institutions with lower transaction volumes that are interested in processing their own payments.

II. ANALYSIS OF COMPETITIVE EFFECT

All operational and legal changes considered by the Board that have a substantial effect on payment system participants are subject to the competitive impact analysis described in the March 1990 policy “The Federal Reserve in the Payments System.”⁵⁶ Under this policy, the Board assesses whether proposed changes would have a direct and material adverse effect on the ability of other service providers to compete effectively with the Federal Reserve in providing similar services because of differing legal powers or constraints or because of a dominant market position deriving from such legal differences. If any proposed changes create such an effect, the Board must further evaluate the changes to assess whether the benefits associated with the changes—such as contributions to payment system efficiency, payment system integrity, or other Board objectives— can be achieved while minimizing the adverse effect on competition.

The 2020 fees, fee structures, and changes in service will not have a direct and material adverse effect on the ability of other service providers to compete effectively with the Reserve Banks in providing similar services. The proposed changes should permit the Reserve Banks to earn a ROE that

⁵⁶ Federal Reserve Regulatory Service (FRRS) 9-1558.

is comparable to overall market returns and provide for full cost recovery over the long run.

III. 2020 Fee Schedules

FEDACH SERVICE 2020 FEE SCHEDULE

EFFECTIVE JANUARY 2, 2020.

BOLD INDICATES CHANGES FROM 2019 PRICES

	Fee
FedACH minimum monthly fee	
Originating depository financial institution (ODFI) ⁵⁷	\$50.00
Receiving depository financial institution (RDFI) ⁵⁸	\$40.00
Origination (per item or record)	
Forward or return items	\$0.0035
SameDay Service - forward item ⁵⁹	\$0.0010 surcharge
Addenda record	\$0.0015
FedLine Web-originated returns and notification of change (NOC) ⁶⁰	\$0.35
Facsimile Exception Return/NOC ⁶¹	\$45.00
SameDay Exception Return	\$45.00
Automated NOC	\$0.20
Volume discounts (based on monthly billed origination volume) ⁶² per item when origination volume is	
750,001 to 1,500,000 items per month	
\$0.0008 discount	
more than 1,500,000 items per month	
\$0.0010 discount	
Volume discounts (based on monthly billed receipt volume) ⁶³ per item when receipt volume is	
10,000,001 to 15,000,000 items per month	
\$0.0002 discount	

⁵⁷ Any ODFI incurring less than \$50 for the following fees will be charged a variable amount to reach the minimum: Forward value and non-value item origination fees, and FedGlobal ACH origination surcharges.

⁵⁸ Any RDFI not originating forward value and non-value items and incurring less than \$40 in receipt fees will be charged a variable amount to reach the minimum. Any RDFI that originates forward value and nonvalue items incurring less than \$50 in forward value and nonvalue item origination fees will only be charged a variable amount to reach the minimum monthly origination fee.

⁵⁹ This surcharge is assessed on all forward items that qualify for same-day processing and settlement and is incremental to the standard origination item fee.

⁶⁰ The fee includes the item and addenda fees in addition to the conversion fee.

⁶¹ The fee includes the item and addenda fees in addition to the conversion fee. Reserve Banks also assess a \$45 fee for every government paper return/NOC they process.

⁶² Origination volumes at these levels qualify for a waterfall discount which includes all FedACH origination items.

⁶³ Origination discounts based on monthly billed receipt volume apply only to those items received by FedACH receiving points and are available only to Premium Receivers.

more than 15,000,000 items per month	
\$0.0003 discount	
Receipt (per item or record)	
Forward Item	\$0.0035
Return Item	\$0.0075
Addenda record	\$0.0015
Volume discounts	
Non-Premium Receivers ⁶⁴ per item when volume is	
750,001 to 12,500,000 items per month ⁶⁵	\$0.0017 discount
more than 12,500,000 items per month ⁶⁶	\$0.0019 discount
Premium Receivers, Level One ⁶⁷ per item when volume is	
750,001 to 1,500,000 items per month ⁶⁵	\$0.0017 discount
1,500,001 to 2,500,000 items per month ⁶⁶	\$0.0017 discount
2,500,001 to 12,500,000 items per month ⁶⁶	\$0.0018 discount
more than 12,500,000 items per month ⁶⁶	\$0.0020 discount
Premium Receivers, Level Two ⁶⁸ per item when volume is	
750,001 to 1,500,000 items per month ⁶⁵	\$0.0017 discount
1,500,001 to 2,500,000 items per month ⁶⁶	\$0.0017 discount
2,500,001 to 12,500,000 items per month ⁶⁶	\$0.0019 discount
more than 12,500,000 items per month ⁶⁶	\$0.0021 discount
FedACH Bundled Package Pricing Discount	
Monthly Bundled Service Package Discount ⁶⁹	\$20.00 discount

⁶⁴ RDFIs receiving through FedACH less than 90 percent of their FedACH-originated items.

⁶⁵ This per-item discount is a reduction to the standard receipt fees listed in this fee schedule.

⁶⁶ Receipt volumes at these levels qualify for a waterfall discount which includes all FedACH receipt items.

⁶⁷ RDFIs receiving through FedACH at least 90 percent of their FedACH-originated items, but less than 90 percent of all of their ACH items originated through any operator.

⁶⁸ RDFIs receiving through FedACH at least 90 percent of all of their ACH items originated through any operator.

⁶⁹To qualify for the discount, a financial institution must meet all of the following criteria in a given month: (1) be charged the minimum monthly fee - forward origination (57208); (2) subscribe to FedLine Web Plus or any higher FedLine[®] access solution; and (3) subscribe to the FedPayments Reporter service, the FedACH RDFI Alert service, or the FedACH Risk Origination Monitoring service.

FedACH Risk[®] Management Services⁷⁰

Monthly Package Fee (a single fee based on total number of criteria sets)

For up to 5 criteria sets	\$35.00
For 6 through 11 criteria sets	\$70.00
For 12 through 23 criteria sets	\$125.00
For 24 through 47 criteria sets	\$150.00
For 48 through 95 criteria sets	\$250.00
For 96 through 191 criteria sets	\$425.00
For 192 through 383 criteria sets	\$675.00
For 384 through 584 criteria sets	\$850.00
For more than 584 criteria sets	\$1,100.00

Batch/Item Monitoring (based on total monthly volume)

For 1 through 100,000 batches (per batch)	\$0.007
For more than 100,000 batches (per batch)	\$0.0035

Monthly FedPayments[®] Reporter Service

FedPayments Reporter Service monthly package includes the following reports

ACH Received Entries Detail – Customer and Depository Financial Institution	
ACH Return Reason Report – Customer and Depository Financial Institution	
ACH Originated Entries Detail – Customer and Depository Financial Institution	
ACH Volume Summary by SEC Code – Customer	
ACH Customer Transaction Activity	
ACH Death Notification	
ACH International (IAT)	
ACH Notification of Change	
ACH Payment Data Information File	
ACH Remittance Advice Detail	
ACH Remittance Advice Summary	
ACH Return Item Report and File	
ACH Return Ratio	
ACH Social Security Beneficiary	
ACH Originator Setup	
ACH Report Delivery via FedLine Solution	
On Demand Report Surcharge ⁷¹	\$1.00

Monthly Package Fee (counts reflect reports generated as well as delivered via a FedLine Solution)

For up to 50 reports	\$40.00
For 51 through 150 reports	\$60.00
For 151 through 500 reports	\$110.00
For 501 through 1,000 reports	\$200.00

⁷⁰ Criteria may be set for both the Origination Monitoring Service and the RDFI Alert Service. Subscribers with no criteria set up will be assessed the \$35 monthly package fee.

For 1,001 through 1,500 reports	\$285.00
For 1,501 through 2,500 reports	\$460.00
For 2,501 through 3,500 reports	\$640.00
For 3,501 through 4,500 reports	\$820.00
For 4,501 through 5,500 reports	\$995.00
For 5,501 through 7,000 reports	\$1,225.00
For 7,001 through 8,500 reports	\$1,440.00
For 8,501 through 10,000 reports	\$1,650.00
For more than 10,000 reports	\$1,800.00
Premier reports (per report generated) ⁷¹	
ACH Volume Summary by SEC Code Report - Depository Financial Institution	
For 1 through 5 reports	\$10.00
For 6 through 10 reports	\$6.00
For 11 or more reports	\$1.00
On Demand Surcharge	\$1.00
ACH Routing Number Activity Report	
For 1 through 5 reports	\$10.00
For 6 through 10 reports	\$6.00
For 11 or more reports	\$1.00
On Demand Surcharge	\$1.00
ACH Originated Batch Report (monthly)	
For 1 through 5 reports	\$10.00
For 6 through 10 reports	\$6.00
For 11 or more reports	\$1.00
On Demand Surcharge	\$1.00
ACH Originated Batch Report (daily)	
Scheduled Report	\$0.65
On Demand Surcharge	\$1.00
On-us inclusion	
Participation (monthly fee per RTN)	\$10.00
Per-item	\$0.0030
Per-addenda	\$0.0015
Report delivery via encrypted email (per email)	\$0.20
Other Fees and Discounts	
Monthly fee (per RTN)	
FedACH Participation Fee ⁷²	\$65.00
SameDay Service Origination Participation Fee ⁷³	\$10.00

⁷¹ Premier reports generated on demand are subject to the package/tiered fees plus a surcharge.

⁷² The fee applies to RTNs that have received or originated FedACH transactions during a month. Institutions that receive only U.S. government transactions or that elect to use a private-sector operator exclusively are not assessed the fee.

⁷³ This surcharge is assessed to any RTN that originates at least one item meeting the criteria for same-day processing and settlement in a given month.

FedACH Settlement Fee ⁷⁴	\$55.00
FedACH Information File Extract Fee	\$150.00
IAT Output File Sort Fee	\$75.00
Fixed Participation Fee - Automated NOCs ⁷⁵	\$5.00
Non-Electronic Input/Output fee ⁷⁶	
CD/DVD (CD or DVD)	\$50.00
Paper (file or report)	\$50.00
Fees and Credits Established by NACHA ⁷⁷	
NACHA Same Day Entry fee (per item)	\$0.052
NACHA Same Day Entry credit (per item)	\$0.052 (credit)
NACHA Unauthorized Entry fee (per item)	\$4.50
NACHA Unauthorized Entry credit (per item)	\$4.50 (credit)
NACHA Admin Network fee (monthly fee per RTN)	\$22.00
NACHA Admin Network fee (per entry)	\$0.000185
FedGlobal [®] ACH Payments ⁷⁸	
Fixed Monthly Fee (per RTN) ⁷⁹	
Monthly origination volume more than 500 items	\$185.00
Monthly origination volume between 161 and 500 items	\$60.00
Monthly origination volume less than 161 items	\$20.00
Per-item Origination Fee for Monthly Volume more than 500 Items (surcharge) ⁸⁰	
Canada service	\$0.50
Mexico service	\$0.55
Panama service	\$0.60
Europe service	\$1.13
Per-item Origination Fee for Monthly Volume between 161 and 500 items (surcharge) ⁸⁰	
Canada service	\$0.75
Mexico service	\$0.80
Panama service	\$0.85
Europe service	\$1.38

⁷⁴ The fee is applied to any RTN with activity during a month, including RTNs of institutions that elect to use a private-sector operator exclusively but also have items routed to or from customers that access the ACH network through FedACH. This fee does not apply to RTNs that use the Reserve Banks for only U.S. government transactions.

⁷⁵ Fee will be assessed only when automated NOCs are generated.

⁷⁶ Limited services are offered in contingency situations.

⁷⁷ The fees and credits listed are collected from the ODFI and credited to NACHA (admin network) or to the RDFI (same-day entry and unauthorized entry) in accordance with the *ACH Rules*.

⁷⁸ The international fees and surcharges vary from country to country as these are negotiated with each international gateway operator.

⁷⁹ A single monthly fee based on total FedGlobal ACH Payments origination volume.

⁸⁰ This per-item surcharge is in addition to the standard domestic origination fees listed in this fee schedule.

Per-item Origination Fee for Monthly Volume less than 161 items (surcharge) ⁸⁰	
Canada service	\$1.00
Mexico service	\$1.05
Panama service	\$1.10
Europe service	\$1.63
Other FedGlobal ACH Payments Fees	
Canada service	
Return received from Canada ⁸¹	\$0.99 (surcharge)
Trace of item at receiving gateway	\$5.50
Trace of item not at receiving gateway	\$7.00
Mexico service	
Return received from Mexico ⁸¹	\$0.91 (surcharge)
Item trace	\$13.50
Foreign currency to foreign currency (F3X) item originated to Mexico ⁸⁰	\$0.67 (surcharge)
Panama service	
Return received from Panama ⁸¹	\$1.00 (surcharge)
Item trace	\$7.00
NOC	\$0.72
Europe service	
F3X item originated to Europe ⁸⁰	\$1.25 (surcharge)
Return received from Europe ⁸¹	\$1.35 (surcharge)
Item trace	\$7.00
Exception Resolution Service	
Fixed Fee per RTN ⁸² (monthly)	
Self-Managed Cases	\$10.00
Agent-Managed Cases	\$10.00
Offline Service Participant	\$60.00
Variable Case Open Monthly Fees per Case (applies to self-managed and agent-managed cases only at the parent RTN) ⁸³	
1 – 50 cases	\$1.25
51 – 100 cases	\$1.00
101 – 500 cases	\$0.75
501 – 1,000 cases	\$0.50
1,001 – 5,000 cases	\$0.25
5,001 – 10,000 cases	\$0.20
10,001 – 99,999,999 cases	\$0.10

⁸¹ This per-item surcharge is in addition to the standard domestic receipt fees listed in this fee schedule.

⁸² Any financial institution that opens at least 1,000 Exception Resolution Service cases in a given month will receive a 50% discount on its Exception Resolution Service fixed fees for that month.

⁸³ The per case fees are rolled up to the parent RTN, such that a customer that opens a total of 100 cases per month under two separate RTNs would pay a total of \$112.50 (\$1.25 for the first 50 cases and \$1.00 for the next 50 cases) in addition to the fixed fees.

Offline Service Participant – Case Fees⁸⁴

Case Open Fee

\$5.00

Case Response Fee

\$5.00

⁸⁴ A depository institution may enroll in the Service as an offline Service Participant by designating the Reserve Bank to access and use the functionality of the application on behalf of the Offline Participant.

FEDWIRE FUNDS AND NATIONAL SETTLEMENT SERVICES 2020 FEE SCHEDULE

EFFECTIVE JANUARY 2, 2020.
BOLD INDICATES CHANGES FROM 2019 PRICES.

Fedwire Funds Service

	Fee
Monthly Participation Fee	\$95.00
Basic volume-based pre-incentive transfer fee (originations and receipts) – per transfer for	
Tier 1: The first 14,000 transfers per month	\$0.840
Tier 2: Additional transfers up to 90,000 per month	\$0.250
Tier 3: Every transfer over 90,000 per month	\$0.165
Volume-based transfer fee with the incentive discount (originations and receipts) – per eligible transfer for⁸⁵	
Tier 1: The first 14,000 transfers per month	\$0.168
Tier 2: Additional transfers up to 90,000 per month	\$0.050
Tier 3: Every transfer over 90,000 per month	\$0.033
Surcharge for Offline Transfers (Originations and Receipt)	\$65.00
Surcharge for End-of-Day Transfer Originations ⁸⁶	\$0.26
Monthly FedPayments Manager Import/Export fee ⁸⁷	\$50.00
Surcharge for high-value payments:	
> \$10 million	\$0.14
> \$100 million	\$0.36

⁸⁵ The incentive discounts apply to the volume that exceeds 60 percent of a customer’s historic benchmark volume. Historic benchmark volume is based on a customer’s average daily activity over the previous five calendar years. If a customer has fewer than five full calendar years of previous activity, its historic benchmark volume is based on its daily activity for as many full calendar years of data as are available. If a customer has less than one year of past activity, then the customer qualifies automatically for incentive discounts for the year. The applicable incentive discounts are as follows: \$0.672 for transfers up to 14,000; \$0.200 for transfers 14,001 to 90,000; and \$0.132 for transfers over 90,000.

⁸⁶ This surcharge applies to originators of transfers that are processed by the Reserve Banks after 5:00 p.m. eastern time.

⁸⁷ This fee is charged to any Fedwire Funds participant that originates a transfer message via the FedPayments Manager (FPM) Funds tool and has the import/export processing option setting active at any point during the month.

Surcharge for Payment Notification:	
Origination Surcharge ⁸⁸	\$0.01
Receipt Volume ^{88,89}	N/A
Delivery of Reports – Hard Copy Reports to On-Line Customers	\$50.00
Special Settlement Arrangements (charge per settlement day) ⁹⁰	\$150.00

National Settlement Service

Basic	
Settlement Entry Fee	\$1.50
Settlement File Fee	\$30.00
Surcharge for Offline File Origination ⁹¹	\$45.00
Minimum Monthly Fee ⁹²	\$60.00

⁸⁸ Payment Notification and End-of-Day Origination surcharges apply to each Fedwire funds transfer message.

⁸⁹ Provided on billing statement for informational purposes only.

⁹⁰ This charge is assessed to settlement arrangements that use the Fedwire Funds Service to effect the settlement of interbank obligations (as opposed to those that use the National Settlement Service). With respect to such special settlement arrangements, other charges may be assessed for each funds transfer into or out of the accounts used in connection with such arrangements.

⁹¹ Offline files will be accepted only on an exception basis when a settlement agent's primary and backup means of transmitting settlement files are both unavailable.

⁹² Any settlement arrangement that accrues less than \$60 during a calendar month will be assessed a variable amount to reach the minimum monthly fee.

FEDWIRE SECURITIES SERVICE 2020 FEE SCHEDULE (NON-TREASURY SECURITIES)

EFFECTIVE JANUARY 2, 2020.

BOLD INDICATES CHANGES FROM 2019 PRICES.

	Fee
Basic Transfer Fee ⁹³	
Transfer or reversal originated or received	\$0.98
Surcharge ⁹⁴	
Offline origination & receipt surcharge	\$80.00
Monthly Maintenance Fees ⁹³	
Account maintenance (per account)	\$57.50
Issue maintenance (per issue/per account)	\$0.77
Claims Adjustment Fee ^{93,95}	\$1.00
GNMA Serial Note Stripping or Reconstitution Fee ⁹⁶	\$9.00
Joint Custody Origination Surcharge ^{93,97}	\$46.00
Delivery of Reports – Hard Copy Reports to On-Line Customers ⁹³	\$50.00

⁹³ These fees are set by the Federal Reserve Banks.

⁹⁴ This surcharge is set by the Federal Reserve Banks. It is in addition to any basic transfer or reversal fee.

⁹⁵ The Federal Reserve Banks offer an automated claim adjustment process only for Agency mortgage-backed securities.

⁹⁶ This fee is set by and remitted to the Government National Mortgage Association (GNMA).

⁹⁷ The Federal Reserve Banks charge participants a Joint Custody Origination Surcharge for both Agency and Treasury securities.

FEDLINE 2020 FEE SCHEDULE

EFFECTIVE JANUARY 2, 2020.

BOLD INDICATES CHANGES FROM 2019 PRICES.

	Fee
<u>FedComplete Packages (monthly)</u> ^{98, 99, 100}	
FedComplete 100A Plus	\$825.00
includes FedLine Advantage Plus package	
FedLine subscriber 5-pack	
Check Participation Fee	
7,500 FedForward transactions	
46 FedForward Cash Letter items	
70 FedReturn transactions	
14,000 FedReceipt [®] transactions	
35 Fedwire Funds origination transfers	
35 Fedwire Funds receipt transfers	
Fedwire monthly participation fee	
1,000 FedACH origination items	
FedACH monthly minimum fee – Forward Origination	
7,500 FedACH receipt items	
FedACH monthly minimum fee – Receipt	
10 FedACH web-originated return/NOC	
500 FedACH addenda record originated	
1,000 FedACH addenda record received	
100 FedACH SameDay Service origination items	
FedACH Participation Fee	
FedACH settlement fee	
FedACH SameDay Service origination participation fee	
FedComplete 100A Premier	\$900.00
includes FedLine Advantage Premier package	
Volumes included in the FedComplete 100A Plus package	

⁹⁸ FedComplete packages are all-electronic service options that bundle payment services with an access solution for one monthly fee.

⁹⁹ Packages with an “A” include the FedLine Advantage channel, and packages with “C” include the FedLine Command channel.

¹⁰⁰ FedComplete customers that use the email service would be charged the FedMail Email a la carte fee and for all FedMail-FedLine Exchange Subscriber 5-packs.

FedComplete 100C Plus	\$1,375.00
includes FedLine Command Plus package	
Volumes included in the FedComplete 100A Plus package	
FedComplete 200A Plus	\$1,350.00
includes FedLine Advantage Plus package	
FedLine subscriber 5-pack	
Check Participation Fee	
25,000 FedForward transactions	
46 FedForward Cash Letter items	
225 FedReturn transactions	
25,000 FedReceipt® transactions	
100 Fedwire Funds origination transfers	
100 Fedwire Funds receipt transfers	
Fedwire monthly participation fee	
2,000 FedACH origination items	
FedACH monthly minimum fee – Forward Origination	
25,000 FedACH receipt items	
FedACH monthly minimum fee – Receipt	
20 FedACH web-originated return/NOC	
750 FedACH addenda record originated	
1,500 FedACH addenda record received	
200 FedACH SameDay Service origination items	
FedACH Participation Fee	
FedACH settlement fee	
FedACH SameDay Service origination participation fee	
FedComplete 200A Premier	\$1,425.00
includes FedLine Advantage Premier package	
Volumes included in the FedComplete 200A Plus package	
FedComplete 200C Plus	\$1,900.00
includes FedLine Command Plus package	
Volumes included in the FedComplete 200A Plus package	
FedComplete Excess Volume and Receipt Surcharge ¹⁰¹	
FedForward ¹⁰²	\$0.037/item
FedReturn	\$0.8200/item

¹⁰¹ Per-item surcharges are in addition to the standard fees listed in the applicable priced services fee schedules.

¹⁰² FedComplete customers will be charged \$4 for each FedForward cash letter over the monthly package threshold. This activity will appear under billing code 51998 in Service Area 1521 on a month-lagged basis.

FedReceipt	\$0.00005/item
Fedwire Funds Origination	\$0.8400/item
Fedwire Funds Receipt	\$0.084/item
FedACH Origination	\$0.0035/item
FedACH Receipt	\$0.00035/item
FedComplete credit adjustment	various
FedComplete debit adjustment	various
<i>FedLine Customer Access Solutions (monthly)</i>	
FedMail ¹⁰³	\$85.00
includes	FedMail access channel
	Check FedFoward, Fed Return and FedReceipt Services
	Check Adjustments
	FedACH Download Advice and Settlement Information
	Fedwire Funds Offline Advices
	Daily Statement of Account (Text)
	Daylight Overdraft Reports
	Monthly Statement of Service Charges (Text)
	Electronic Cash Difference Advices
FedLine Exchange ¹⁰³	\$40.00
includes	E-Payments Directory (via manual download)
FedLine Exchange Premier ¹⁰³	\$125.00
includes	FedLine Exchange package
	E-Payments Directory (via automated download)
FedLine Web ¹⁰⁴	\$110.00
includes	FedLine Web access channel
	Services included in the FedLine Exchange package
	Check FedForward, FedReturn and FedReceipt services
	Check Adjustments
	FedACH Derived Returns and NOCs
	FedACH File, Batch and Item Detail Information
	FedACH Download Advice

¹⁰³ FedMail and FedLine Exchange packages do not include user credentials, which are required to access priced services and certain informational services. Credentials are sold separately in packs of five via the FedMail-FedLine Exchange Subscriber 5-pack.

¹⁰⁴ FedLine Web and Advantage packages do not include user credentials, which are required to access priced services and certain informational services. Credentials are sold separately in packs of five via the FedLine Subscriber 5-pack.

FedACH Settlement Information
 FedACH Customer Profile Information
 FedACH Returns Activity Statistics
 FedACH Risk RDFI Alert Service
 FedACH Risk Returns Reporting Service
 FedACH Exception Resolution Service
 FedCash® Services

FedLine Web Plus¹⁰⁴ \$160.00

includes Services included in the FedLine Web package
 FedACH Risk Origination Monitoring Service
 FedACH FedPayments Reporter Service
 Check Large Dollar Return
 Check FedImage Services
 Account Management Information (AMI)
 Daily Statement of Account (PDF, Text)
 Daylight Overdraft Reports
 Monthly Account Services (SCRD) File
 Monthly Statement of Service Charges (PDF, Text)
 E-Payments Routing Directory (via automated download)

FedLine Advantage¹⁰⁴ \$415.00

includes FedLine Advantage access channel
 One VPN device
 Services included in the FedLine Web package
 FedACH File Transmission To/From Federal Reserve
 FedACH Request Output File Delivery
 FedACH View File Transmission and Processing Status
 Fedwire Originate and Receive Funds Transfer
 Fedwire Originate and Receive Securities Transfer
 National Settlement Service Services
 Check Large Dollar Return
 Check FedImage Services
 Account Management Information with Intra-Day Download Search File
 Daily Statement of Account (PDF, Text)
 Daylight Overdraft Reports
 Monthly Account Services (SCRD) File
 Monthly Statement of Service Charges (PDF, Text)

FedLine Advantage Plus¹⁰⁴ \$460.00

includes Services included in the FedLine Advantage package
 One VPN device
 FedACH Risk Origination Monitoring Service
 FedACH FedPayments Reporter Service
 Fedwire Funds FedPayments Manager Import/Export (less than or equal to 250
 Fedwire transactions and one routing number per month)
 FedTransaction Analyzer[®] (less than 250 or equal to Fedwire transactions and one
 routing number per month)
 E-Payments Routing Directory (via automated download)

FedLine Advantage Premier¹⁰⁴ \$570.00

includes FedLine Advantage Plus package
 Two VPN devices
 Fedwire Funds FedPayments Manager Import/Export (more than 250 Fedwire
 transactions or more than one routing number in a given month)
 FedTransaction Analyzer (more than 250 Fedwire transactions or more than one
 routing number per month)

FedLine Command Plus \$1,035.00

includes FedLine Command access channel
 Services included in the FedLine Advantage Plus package
 One VPN device
 Additional FedLine Command server certificates
 Fedwire Statement Services
 Fedwire Funds FedPayments Manager Import/Export
 FedTransaction Analyzer
 Intra-Day File with Transaction Details (up to six times daily)
 Statement of Account Spreadsheet File (SASF)

Financial Institution Reconciliation Data (FIRD) File (machine readable)

FedLine Direct Plus (Legacy 256K) ¹⁰⁵	\$5,500.00
includes	FedLine Direct access channel One VPN device 256K Dedicated WAN Connection Services included in the FedLine Command Plus package Two FedLine Direct server certificates Daylight Overdraft Reports Treasury Check Information System (TCIS)
FedLine Direct Plus Error! Bookmark not defined.	\$5,500.00
includes	FedLine Direct access channel One VPN device 2 Mbps Dedicated WAN Connection Services included in the FedLine Command Plus package FedLine Direct server certificates Treasury Check Information System (TCIS) Dual Vendors FedLine Direct Contingency Solution Check 21 Services
FedLine Direct Premier (Legacy T1) Error! Bookmark not defined.	\$7,500.00
includes	FedLine Direct Plus package (legacy) T1 dedicated WAN connection Two VPN devices
FedLine Direct Premier ¹⁰⁶	\$10,500.00
includes	FedLine Direct Plus package (new) Two 2 Mbps dedicated WAN Connections One Network Diversity Two VPN devices

¹⁰⁵ Limited to installed base only. All customers with 256K or T1 connections will need to upgrade to a minimum 2Mbps Ethernet line speed connection associated with the FedLine Direct packages Effective May 1, 2020, package price will increase to \$10,000 for FedLine Direct® Plus (Legacy 256K) and FedLine Direct Premier (Legacy T1). Effective August 1, 2020, package price will increase to \$20,000 for FedLine Direct® Plus (Legacy 256K) and FedLine Direct Premier (Legacy T1).

¹⁰⁶ Early termination fees and/or expedited order fees may apply to all FedLine Direct packages and FedLine Direct a la carte options.

*A la carte options (monthly)*¹⁰⁷

Electronic Access

FedMail - FedLine Exchange Subscriber 5-pack	\$15.00
FedLine Subscriber 5-pack (access to Web and Advantage)	\$80.00
Additional FedLine Direct Certificate ¹⁰⁸	\$100.00
Additional VPNs ¹⁰⁹	\$100.00
Additional WAN connections Error! Bookmark not defined.	
256K(Legacy) Error! Bookmark not defined.	\$3,500.00
T1 (Legacy) Error! Bookmark not defined.	\$3,500.00
2 Mbps	\$3,000.00
WAN Connection Upgrade	
10 Mbps ¹¹⁰	\$1,700.00
30 Mbps ¹¹⁰	\$3,000.00
50 Mbps ¹¹⁰	\$4,000.00
100 Mbps ¹¹⁰	\$7,000.00
200 Mbps ¹¹⁰	\$11,000.00
FedLine International Setup (one-time fee)	\$5,000.00
FedLine Custom Implementation Fee ¹¹¹	various
Network Diversity	\$2,500.00
FedLine Direct Contingency Solution ¹¹²	\$1,000.00
Check 21 Large File Delivery ¹¹³	various

¹⁰⁷ These add-on services can be purchased only with a FedLine Solutions packages.

¹⁰⁸ Fee applies only to customers in a legacy FedLine Direct package. Server certificates are included in the monthly fee for customers in the new FedLine Direct packages.

¹⁰⁹ Additional VPNs are available for FedLine Advantage, FedLine Command, and FedLine Direct packages only.

¹¹⁰ These upgrades are only available for the new FedLine Direct packages and the Add'l 2M WAN connection. Fee is in addition to the FedLine Direct package fees or additional WAN fees.

¹¹¹ The FedLine Custom Implementation Fee is \$2,500 or \$5,000 based on the complexity of the setup.

¹¹² Fee only applies to customers in a legacy FedLine Direct package. This feature is included in the monthly fee for customers in the new FedLine Direct packages.

¹¹³ Limited to installed base only. The fee currently ranges from \$1,400 to \$20,725 depending on the size, speed, and location of the connection. All customers will eventually need to upgrade to a minimum 2 Mbps Ethernet line speed connection with the associated FedLine Direct package. Effective January 2, 2020, fees will increase by 20.0 percent for Check 21 Large File Delivery. Effective May 1, 2020, fees will increase by 50.0 percent for Check 21 Large File Delivery. Effective August 1, 2020, fees will increase by 100.0 percent for Check 21 Large File Delivery. To avoid compounding increases, the fee as of December 2019 will serve as the baseline for all 2020 price increases for any Check 21 Large File Delivery connection.

FedMail Email (for customers with FedLine Web and above)¹¹⁴	\$40.00
FedMail Fax¹¹⁵	\$150.00
VPN Device Modification	\$200.00
VPN Device Missed Activation Appointment	\$175.00
VPN Device Expedited Hardware Surcharge	\$100.00
VPN Device Replacement or Move	\$300.00
E-Payments Automated Download (1-5 Add'l Codes) ¹¹⁶	\$75.00
E-Payments Automated Download (6-20 Add'l Codes) ¹¹⁶	\$150.00
E-Payments Automated Download (21-50 Add'l Codes) ¹¹⁶	\$300.00
E-Payments Automated Download (51-100 Add'l Codes) ¹¹⁶	\$500.00
E-Payments Automated Download (101-250 Add'l Codes) ¹¹⁶	\$1,000.00
E-Payments Automated Download (>250 Add'l Codes) ¹¹⁶	\$2,000.00
 Accounting Information Services (monthly)	
Cash Management System (CMS) Plus – Own report – up to six files with ¹¹⁷	
no respondent/sub-account activity	\$60.00
less than 9 respondent and/or sub-accounts	\$125.00
10-50 respondent and/or sub-accounts	\$250.00
51-100 respondents and/or sub-accounts	\$500.00
101-500 respondents and/or sub-accounts	\$750.00
>500 respondents and/or sub-accounts	\$1,000.00
End-of-Day Financial Institution Reconciliation Data (FIRD) File ¹¹⁸	\$150.00
Statement of Account Spreadsheet File ¹¹⁹	\$150.00
Intra-day Download Search File (with AMI) ¹²⁰	\$150.00
 Other	
Software Certification	\$0.00 to \$8,000.00
Vendor Pass-Through Fee	various
Electronic Access Credit Adjustment	various
Electronic Access Debit Adjustment	various

¹¹⁴ Available only to customers with a priced FedLine package.

¹¹⁵ Limited to installed base only.

¹¹⁶ Five download codes are included at no cost in all Plus and Premier packages.

¹¹⁷ Cash Management Service options are limited to plus and premier packages.

¹¹⁸ The End of Day Reconciliation File option is available for FedLine Web Plus, FedLine Advantage Plus, and Premier packages. It is available for no extra fee in FedLine Command Plus and Direct packages.

¹¹⁹ The Statement of Account Spreadsheet File option is available for FedLine Web Plus, FedLine Advantage Plus, and Premier packages. It is available for no extra fee in FedLine Command Plus and Direct packages.

¹²⁰ The Intra-day Download Search File option is available for the FedLine Web Plus package. It is available for no extra fee in FedLine Advantage and higher packages.

[THIS SIGNATURE PAGE RELATES TO THE NOTICE ENTITLED “FEDERAL RESERVE BANK SERVICES” FRB DOCKET NO. OP – 1687]

By order of the Board of Governors of the Federal Reserve System, November 26, 2019.

Ann Misback (signed)

Ann Misback,

Secretary of the Board.