

Form 5500 Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Annual Return/Report of Employee Benefit Plan This form is required to be filed for employee benefit plans under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and sections 6057(b) and 6058(a) of the Internal Revenue Code (the Code). ▶ Complete all entries in accordance with the instructions to the Form 5500.	OMB Nos. 1210-0110 1210-0089 2022 This Form is Open to Public Inspection
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Part I	Annual Report Identification Information
For calendar plan year 2022 or fiscal plan year beginning <u>01/01/2022</u> and ending <u>12/31/2022</u>	
A This return/report is for:	☐ a multiemployer plan ☐ a multiple-employer plan (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.) ☒ a single-employer plan ☐ a DFE (specify) ____
B This return/report is:	☐ the first return/report ☐ the final return/report ☐ an amended return/report ☐ a short plan year return/report (less than 12 months)
C If the plan is a collectively-bargained plan, check here.	☐
D Check box if filing under:	☒ Form 5558 ☐ automatic extension ☐ the DFVC program ☐ special extension (enter description)
E If this is a retroactively adopted plan permitted by SECURE Act section 201, check here.	☐

Part II Basic Plan Information —enter all requested information		
1a Name of plan <u>ARROWSTREET INC. 401K PROFIT SHARING</u>	1b	Three-digit plan number (PN) ▶ <u>001</u>
2a Plan sponsor's name (employer, if for a single-employer plan) Mailing address (include room, apt., suite no. and street, or P.O. Box) City or town, state or province, country, and ZIP or foreign postal code (if foreign, see instructions) <u>ARROWSTREET, INC.</u> <u>10 POST OFFICE SQUARE</u> <u>SUITE 700N</u> <u>BOSTON, MA 02109</u>	1c	Effective date of plan <u>01/01/1986</u>
	2b	Employer Identification Number (EIN) <u>04-2323820</u>
	2c	Plan Sponsor's telephone number <u>617-623-5555</u>
	2d	Business code (see instructions) <u>541310</u>

Caution: A penalty for the late or incomplete filing of this return/report will be assessed unless reasonable cause is established.

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this return/report, including accompanying schedules, statements and attachments, as well as the electronic version of this return/report, and to the best of my knowledge and belief, it is true, correct, and complete.

SIGN HERE	Filed with authorized/valid electronic signature.	10/09/2023	NANCY L. NEVILLE
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE	Filed with authorized/valid electronic signature.	10/09/2023	NANCY L. NEVILLE
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor
SIGN HERE			
	Signature of DFE	Date	Enter name of individual signing as DFE

For Paperwork Reduction Act Notice, see the Instructions for Form 5500.

Form 5500 (2022)
v. 220413

3a Plan administrator's name and address ☒ Same as Plan Sponsor		3b Administrator's EIN
		3c Administrator's telephone number
4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report: a Sponsor's name c Plan Name		4b EIN 4d PN
5 Total number of participants at the beginning of the plan year		5 137
6 Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines 6a(1) , 6a(2) , 6b , 6c , and 6d).		
a(1) Total number of active participants at the beginning of the plan year		6a(1) 78
a(2) Total number of active participants at the end of the plan year		6a(2) 76
b Retired or separated participants receiving benefits		6b 4
c Other retired or separated participants entitled to future benefits.....		6c 61
d Subtotal. Add lines 6a(2) , 6b , and 6c		6d 141
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.		6e 1
f Total. Add lines 6d and 6e		6f 142
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item).....		6g 137
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested.....		6h 0
7 Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item)		7
8a If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristics Codes in the instructions: 2A 2E 2G 2J 2K 2S 2T 3D		
b If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristics Codes in the instructions:		
9a Plan funding arrangement (check all that apply)		9b Plan benefit arrangement (check all that apply)
(1) ☒ Insurance	(1) ☒ Insurance	
(2) ☐ Code section 412(e)(3) insurance contracts	(2) ☐ Code section 412(e)(3) insurance contracts	
(3) ☒ Trust	(3) ☒ Trust	
(4) ☐ General assets of the sponsor	(4) ☐ General assets of the sponsor	
10 Check all applicable boxes in 10a and 10b to indicate which schedules are attached, and, where indicated, enter the number attached. (See instructions)		
a Pension Schedules		b General Schedules
(1) ☒ R (Retirement Plan Information)	(1) ☒ H (Financial Information)	
(2) ☐ MB (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary	(2) ☐ I (Financial Information – Small Plan)	
(3) ☐ SB (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary	(3) ☒ 2 A (Insurance Information)	
	(4) ☒ C (Service Provider Information)	
	(5) ☐ D (DFE/Participating Plan Information)	
	(6) ☐ G (Financial Transaction Schedules)	

Part III Form M-1 Compliance Information (to be completed by welfare benefit plans)

11a If the plan provides welfare benefits, was the plan subject to the Form M-1 filing requirements during the plan year? (See instructions and 29 CFR 2520.101-2.) ☐ Yes ☐ No

If "Yes" is checked, complete lines 11b and 11c.

11b Is the plan currently in compliance with the Form M-1 filing requirements? (See instructions and 29 CFR 2520.101-2.) ☐ Yes ☐ No

11c Enter the Receipt Confirmation Code for the 2022 Form M-1 annual report. If the plan was not required to file the 2022 Form M-1 annual report, enter the Receipt Confirmation Code for the most recent Form M-1 that was required to be filed under the Form M-1 filing requirements. (Failure to enter a valid Receipt Confirmation Code will subject the Form 5500 filing to rejection as incomplete.)

Receipt Confirmation Code _____

SCHEDULE A (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Insurance Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ File as an attachment to Form 5500. ▶ Insurance companies are required to provide the information pursuant to ERISA section 103(a)(2).	OMB No. 1210-0110 2022 This Form is Open to Public Inspection
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For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022	
A Name of plan ARROWSTREET INC. 401K PROFIT SHARING	B Three-digit plan number (PN) ▶ 001
C Plan sponsor's name as shown on line 2a of Form 5500 ARROWSTREET, INC.	D Employer Identification Number (EIN) 04-2323820

Part I	Information Concerning Insurance Contract Coverage, Fees, and Commissions	Provide information for each contract on a separate Schedule A. Individual contracts grouped as a unit in Parts II and III can be reported on a single Schedule A.
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1 Coverage Information:

(a) Name of insurance carrier MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY
--

(b) EIN	(c) NAIC code	(d) Contract or identification number	(e) Approximate number of persons covered at end of policy or contract year	Policy or contract year	
				(f) From	(g) To
04-1590850	65935	780773-01	20	10/29/2022	12/31/2022

2 Insurance fee and commission information. Enter the total fees and total commissions paid. List in line 3 the agents, brokers, and other persons in descending order of the amount paid.

(a) Total amount of commissions paid	(b) Total amount of fees paid
0	0

3 Persons receiving commissions and fees. (Complete as many entries as needed to report all persons).

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid
--

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid
--

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

Part II Investment and Annuity Contract Information

Where individual contracts are provided, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

4	Current value of plan's interest under this contract in the general account at year end.....	4	2083263
5	Current value of plan's interest under this contract in separate accounts at year end.....	5	0

6 Contracts With Allocated Funds:**a** State the basis of premium rates ▶

b	Premiums paid to carrier	6b	
c	Premiums due but unpaid at the end of the year	6c	
d	If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, enter amount..... Specify nature of costs ▶	6d	

e Type of contract: (1) ☐ individual policies (2) ☐ group deferred annuity
(3) ☐ other (specify) ▶

f If contract purchased, in whole or in part, to distribute benefits from a terminating plan, check here ▶ ☐

7 Contracts With Unallocated Funds (Do not include portions of these contracts maintained in separate accounts)

a Type of contract: (1) ☐ deposit administration (2) ☐ immediate participation guarantee
(3) ☐ guaranteed investment (4) ☒ other ▶ **GROUP ANNUITY CONTRACT**

b Balance at the end of the previous year **7b** 0

c	Additions: (1) Contributions deposited during the year	7c(1)	7529	
	(2) Dividends and credits.....	7c(2)	4558	
	(3) Interest credited during the year.....	7c(3)		
	(4) Transferred from separate account.....	7c(4)		
	(5) Other (specify below)	7c(5)	2378962	
	▶ TRANSFER FROM MM CONTRACT, LOAN REPAYMENTS			

(6) Total additions..... **7c(6)** 2391049

d Total of balance and additions (add lines **7b** and **7c(6)**)..... **7d** 2391049

e Deductions:

(1) Disbursed from fund to pay benefits or purchase annuities during year	7e(1)	307780
(2) Administration charge made by carrier.....	7e(2)	6
(3) Transferred to separate account.....	7e(3)	
(4) Other (specify below)	7e(4)	

▶

(5) Total deductions..... **7e(5)** 307786

f Balance at the end of the current year (subtract line **7e(5)** from line **7d**)..... **7f** 2083263

Part III Welfare Benefit Contract Information

If more than one contract covers the same group of employees of the same employer(s) or members of the same employee organizations(s), the information may be combined for reporting purposes if such contracts are experience-rated as a unit. Where contracts cover individual employees, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

8 Benefit and contract type (check all applicable boxes)

- a** ☐ Health (other than dental or vision)
b ☐ Dental
c ☐ Vision
d ☐ Life insurance
e ☐ Temporary disability (accident and sickness)
f ☐ Long-term disability
g ☐ Supplemental unemployment
h ☐ Prescription drug
i ☐ Stop loss (large deductible)
j ☐ HMO contract
k ☐ PPO contract
l ☐ Indemnity contract
m ☐ Other (specify) ▶

9 Experience-rated contracts:

a Premiums: (1) Amount received	9a(1)		
(2) Increase (decrease) in amount due but unpaid	9a(2)		
(3) Increase (decrease) in unearned premium reserve.....	9a(3)		
(4) Earned ((1) + (2) - (3)).....		9a(4)	
b Benefit charges (1) Claims paid.....	9b(1)		
(2) Increase (decrease) in claim reserves	9b(2)		
(3) Incurred claims (add (1) and (2)).....		9b(3)	
(4) Claims charged		9b(4)	
c Remainder of premium: (1) Retention charges (on an accrual basis) --			
(A) Commissions	9c(1)(A)		
(B) Administrative service or other fees	9c(1)(B)		
(C) Other specific acquisition costs.....	9c(1)(C)		
(D) Other expenses	9c(1)(D)		
(E) Taxes	9c(1)(E)		
(F) Charges for risks or other contingencies	9c(1)(F)		
(G) Other retention charges.....	9c(1)(G)		
(H) Total retention.....		9c(1)(H)	
(2) Dividends or retroactive rate refunds. (These amounts were ☐ paid in cash, or ☐ credited.)		9c(2)	
d Status of policyholder reserves at end of year: (1) Amount held to provide benefits after retirement.....		9d(1)	
(2) Claim reserves		9d(2)	
(3) Other reserves		9d(3)	
e Dividends or retroactive rate refunds due. (Do not include amount entered in line 9c(2).).....		9e	

10 Nonexperience-rated contracts:

a Total premiums or subscription charges paid to carrier	10a	
b If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, other than reported in Part I, line 2 above, report amount.	10b	

Specify nature of costs.

Part IV Provision of Information

11 Did the insurance company fail to provide any information necessary to complete Schedule A? ☐ Yes ☒ No

12 If the answer to line 11 is "Yes," specify the information not provided. ▶

SCHEDULE A (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Insurance Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ File as an attachment to Form 5500. ▶ Insurance companies are required to provide the information pursuant to ERISA section 103(a)(2).	OMB No. 1210-0110 2022 This Form is Open to Public Inspection
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For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022	
A Name of plan ARROWSTREET INC. 401K PROFIT SHARING	B Three-digit plan number (PN) ▶ 001
C Plan sponsor's name as shown on line 2a of Form 5500 ARROWSTREET, INC.	D Employer Identification Number (EIN) 04-2323820

Part I	Information Concerning Insurance Contract Coverage, Fees, and Commissions	Provide information for each contract on a separate Schedule A. Individual contracts grouped as a unit in Parts II and III can be reported on a single Schedule A.
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1 Coverage Information:

(a) Name of insurance carrier MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY
--

(b) EIN	(c) NAIC code	(d) Contract or identification number	(e) Approximate number of persons covered at end of policy or contract year	Policy or contract year	
				(f) From	(g) To
04-1590850	65935	MR 615571	0	01/01/2022	10/28/2022

2 Insurance fee and commission information. Enter the total fees and total commissions paid. List in line 3 the agents, brokers, and other persons in descending order of the amount paid.

(a) Total amount of commissions paid 0	(b) Total amount of fees paid 0
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3 Persons receiving commissions and fees. (Complete as many entries as needed to report all persons).

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid
--

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid
--

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

Part II Investment and Annuity Contract Information

Where individual contracts are provided, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

4	Current value of plan's interest under this contract in the general account at year end.....	4	0
5	Current value of plan's interest under this contract in separate accounts at year end.....	5	0

6 Contracts With Allocated Funds:**a** State the basis of premium rates ▶

b	Premiums paid to carrier	6b	
c	Premiums due but unpaid at the end of the year	6c	
d	If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, enter amount..... Specify nature of costs ▶	6d	

e Type of contract: (1) ☐ individual policies (2) ☐ group deferred annuity
(3) ☐ other (specify) ▶

f If contract purchased, in whole or in part, to distribute benefits from a terminating plan, check here ▶ ☐

7 Contracts With Unallocated Funds (Do not include portions of these contracts maintained in separate accounts)

a Type of contract: (1) ☐ deposit administration (2) ☐ immediate participation guarantee
(3) ☐ guaranteed investment (4) ☒ other ▶ **GROUP ANNUITY CONTRACT**

b Balance at the end of the previous year **7b** **1625944**

c	Additions: (1) Contributions deposited during the year	7c(1)	10665	
	(2) Dividends and credits.....	7c(2)		
	(3) Interest credited during the year.....	7c(3)	19963	
	(4) Transferred from separate account.....	7c(4)	758965	
	(5) Other (specify below)	7c(5)	1899	

▶ **LN INT, LN PRIN**

(6) Total additions..... **7c(6)** **791492**

d Total of balance and additions (add lines **7b** and **7c(6)**)..... **7d** **2417436**

e Deductions:

(1) Disbursed from fund to pay benefits or purchase annuities during year	7e(1)	40003	
(2) Administration charge made by carrier.....	7e(2)	94	
(3) Transferred to separate account.....	7e(3)		
(4) Other (specify below)	7e(4)	2377339	

▶ **TRANSFER TO NEW CONTRACT**

(5) Total deductions..... **7e(5)** **2417436**

f Balance at the end of the current year (subtract line **7e(5)** from line **7d**)..... **7f** **0**

Part III Welfare Benefit Contract Information

If more than one contract covers the same group of employees of the same employer(s) or members of the same employee organizations(s), the information may be combined for reporting purposes if such contracts are experience-rated as a unit. Where contracts cover individual employees, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

8 Benefit and contract type (check all applicable boxes)

- a** ☐ Health (other than dental or vision)
b ☐ Dental
c ☐ Vision
d ☐ Life insurance
e ☐ Temporary disability (accident and sickness)
f ☐ Long-term disability
g ☐ Supplemental unemployment
h ☐ Prescription drug
i ☐ Stop loss (large deductible)
j ☐ HMO contract
k ☐ PPO contract
l ☐ Indemnity contract
m ☐ Other (specify) ▶

9 Experience-rated contracts:

a Premiums: (1) Amount received	9a(1)		
(2) Increase (decrease) in amount due but unpaid	9a(2)		
(3) Increase (decrease) in unearned premium reserve	9a(3)		
(4) Earned ((1) + (2) - (3))		9a(4)	
b Benefit charges (1) Claims paid	9b(1)		
(2) Increase (decrease) in claim reserves	9b(2)		
(3) Incurred claims (add (1) and (2))		9b(3)	
(4) Claims charged		9b(4)	
c Remainder of premium: (1) Retention charges (on an accrual basis) --			
(A) Commissions	9c(1)(A)		
(B) Administrative service or other fees	9c(1)(B)		
(C) Other specific acquisition costs	9c(1)(C)		
(D) Other expenses	9c(1)(D)		
(E) Taxes	9c(1)(E)		
(F) Charges for risks or other contingencies	9c(1)(F)		
(G) Other retention charges	9c(1)(G)		
(H) Total retention		9c(1)(H)	
(2) Dividends or retroactive rate refunds. (These amounts were ☐ paid in cash, or ☐ credited.)		9c(2)	
d Status of policyholder reserves at end of year: (1) Amount held to provide benefits after retirement		9d(1)	
(2) Claim reserves		9d(2)	
(3) Other reserves		9d(3)	
e Dividends or retroactive rate refunds due. (Do not include amount entered in line 9c(2).)		9e	

10 Nonexperience-rated contracts:

a Total premiums or subscription charges paid to carrier	10a	
b If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, other than reported in Part I, line 2 above, report amount. Specify nature of costs.	10b	

Part IV Provision of Information

11 Did the insurance company fail to provide any information necessary to complete Schedule A? ☐ Yes ☒ No

12 If the answer to line 11 is "Yes," specify the information not provided. ▶

SCHEDULE C (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Service Provider Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ File as an attachment to Form 5500.	OMB No. 1210-0110
		2022
		This Form is Open to Public Inspection.

For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022		
A Name of plan ARROWSTREET INC. 401K PROFIT SHARING	B Three-digit plan number (PN) ▶	001
C Plan sponsor's name as shown on line 2a of Form 5500 ARROWSTREET, INC.	D Employer Identification Number (EIN) 04-2323820	

Part I	Service Provider Information (see instructions)
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You must complete this Part, in accordance with the instructions, to report the information required for **each person** who received, directly or indirectly, \$5,000 or more in total compensation (i.e., money or anything else of monetary value) in connection with services rendered to the plan or the person's position with the plan during the plan year. If a person received **only** eligible indirect compensation for which the plan received the required disclosures, you are required to answer line 1 but are not required to include that person when completing the remainder of this Part.

1 Information on Persons Receiving Only Eligible Indirect Compensation

- a Check "Yes" or "No" to indicate whether you are excluding a person from the remainder of this Part because they received only eligible indirect compensation for which the plan received the required disclosures (see instructions for definitions and conditions).. ☐ Yes ☒ No
- b If you answered line 1a "Yes," enter the name and EIN or address of each person providing the required disclosures for the service providers who received only eligible indirect compensation. Complete as many entries as needed (see instructions).

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation
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(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

2. Information on Other Service Providers Receiving Direct or Indirect Compensation. Except for those persons for whom you answered "Yes" to line 1a above, complete as many entries as needed to list each person receiving, directly or indirectly, \$5,000 or more in total compensation (i.e., money or anything else of value) in connection with services rendered to the plan or their position with the plan during the plan year. (See instructions).

(a) Enter name and EIN or address (see instructions)

GLOBAL RETIREMENT PARTNERS LLC

4340 REDWOOD HWY
SUITE B60
SAN RAFAEL, CA 94903

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
27	NONE	4906	Yes ☐ No ☒	Yes ☐ No ☐		Yes ☐ No ☐

(a) Enter name and EIN or address (see instructions)

MASSACHUSETTS MUTUAL LIFE INSURANCE

04-1590850

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
62 64	NONE	1113	Yes ☒ No ☐	Yes ☒ No ☐	0	Yes ☐ No ☒

(a) Enter name and EIN or address (see instructions)

EMPOWER ANNUITY INSURANCE COMPANY

8515 EAST ORCHARD ROAD
GREENWOOD VILLAGE, CO 80111

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
64	NONE	323	Yes ☒ No ☐	Yes ☒ No ☐	0	Yes ☒ No ☐

2. Information on Other Service Providers Receiving Direct or Indirect Compensation. Except for those persons for whom you answered "Yes" to line 1a above, complete as many entries as needed to list each person receiving, directly or indirectly, \$5,000 or more in total compensation (i.e., money or anything else of value) in connection with services rendered to the plan or their position with the plan during the plan year. (See instructions).

(a) Enter name and EIN or address (see instructions)

GLOBAL RETIREMENT PARTNERS LLC

47-1411118

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
27	NONE	0	Yes ☒ No ☐	Yes ☐ No ☒	26896	Yes ☐ No ☒

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

Part I Service Provider Information (continued)

3. If you reported on line 2 receipt of indirect compensation, other than eligible indirect compensation, by a service provider, and the service provider is a fiduciary or provides contract administrator, consulting, custodial, investment advisory, investment management, broker, or recordkeeping services, answer the following questions for (a) each source from whom the service provider received \$1,000 or more in indirect compensation and (b) each source for whom the service provider gave you a formula used to determine the indirect compensation instead of an amount or estimated amount of the indirect compensation. Complete as many entries as needed to report the required information for each source.

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
MASSACHUSETTS MUTUAL LIFE INSURANCE	27	26896

(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.
GREAT WEST LIFE & ANNUITY INSURANCE 84-0467907	PLAN RELATED EXPENSES

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation

(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation

(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.

Part II Service Providers Who Fail or Refuse to Provide Information

4 Provide, to the extent possible, the following information for each service provider who failed or refused to provide the information necessary to complete this Schedule.

(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide

Part III Termination Information on Accountants and Enrolled Actuaries (see instructions)
(complete as many entries as needed)

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

SCHEDULE H (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Financial Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA), and section 6058(a) of the Internal Revenue Code (the Code). ► File as an attachment to Form 5500.	OMB No. 1210-0110 2022 This Form is Open to Public Inspection
For calendar plan year 2022 or fiscal plan year beginning <u>01/01/2022</u> and ending <u>12/31/2022</u>		
A Name of plan <u>ARROWSTREET INC. 401K PROFIT SHARING</u>	B Three-digit plan number (PN) ►	<u>001</u>
C Plan sponsor's name as shown on line 2a of Form 5500 <u>ARROWSTREET, INC.</u>	D Employer Identification Number (EIN) <u>04-2323820</u>	

Part I	Asset and Liability Statement		
1 Current value of plan assets and liabilities at the beginning and end of the plan year. Combine the value of plan assets held in more than one trust. Report the value of the plan's interest in a commingled fund containing the assets of more than one plan on a line-by-line basis unless the value is reportable on lines 1c(9) through 1c(14). Do not enter the value of that portion of an insurance contract which guarantees, during this plan year, to pay a specific dollar benefit at a future date. Round off amounts to the nearest dollar. MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 1b(1), 1b(2), 1c(8), 1g, 1h, and 1i. CCTs, PSAs, and 103-12 IEs also do not complete lines 1d and 1e. See instructions.			
Assets		(a) Beginning of Year	(b) End of Year
a Total noninterest-bearing cash.....		1a	
b Receivables (less allowance for doubtful accounts):			
(1) Employer contributions.....		1b(1)	8245480593
(2) Participant contributions.....		1b(2)	
(3) Other.....		1b(3)	
c General investments:			
(1) Interest-bearing cash (include money market accounts & certificates of deposit).....		1c(1)	
(2) U.S. Government securities		1c(2)	
(3) Corporate debt instruments (other than employer securities):			
(A) Preferred		1c(3)(A)	
(B) All other		1c(3)(B)	
(4) Corporate stocks (other than employer securities):			
(A) Preferred		1c(4)(A)	
(B) Common.....		1c(4)(B)	
(5) Partnership/joint venture interests		1c(5)	
(6) Real estate (other than employer real property)		1c(6)	
(7) Loans (other than to participants).....		1c(7)	
(8) Participant loans.....		1c(8)	5707717064
(9) Value of interest in common/collective trusts.....		1c(9)	
(10) Value of interest in pooled separate accounts		1c(10)	
(11) Value of interest in master trust investment accounts.....		1c(11)	
(12) Value of interest in 103-12 investment entities		1c(12)	
(13) Value of interest in registered investment companies (e.g., mutual funds).....		1c(13)	2285362716349586
(14) Value of funds held in insurance company general account (unallocated contracts).....		1c(14)	16259452083263
(15) Other		1c(15)	

1d Employer-related investments:		(a) Beginning of Year	(b) End of Year
(1) Employer securities	1d(1)		
(2) Employer real property	1d(2)		
e Buildings and other property used in plan operation	1e		
f Total assets (add all amounts in lines 1a through 1e)	1f	24619103	18530506

Liabilities

g Benefit claims payable	1g		
h Operating payables	1h		
i Acquisition indebtedness	1i		
j Other liabilities	1j		
k Total liabilities (add all amounts in lines 1g through 1j)	1k	0	0

Net Assets

l Net assets (subtract line 1k from line 1f)	1l	24619103	18530506
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Part II Income and Expense Statement

2 Plan income, expenses, and changes in net assets for the year. Include all income and expenses of the plan, including any trust(s) or separately maintained fund(s) and any payments/receipts to/from insurance carriers. Round off amounts to the nearest dollar. MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 2a, 2b(1)(E), 2e, 2f, and 2g.

Income

		(a) Amount	(b) Total
a Contributions:			
(1) Received or receivable in cash from: (A) Employers	2a(1)(A)	80593	
(B) Participants	2a(1)(B)	742206	
(C) Others (including rollovers)	2a(1)(C)		
(2) Noncash contributions	2a(2)		
(3) Total contributions. Add lines 2a(1)(A) , (B) , (C) , and line 2a(2)	2a(3)		822799
b Earnings on investments:			
(1) Interest:			
(A) Interest-bearing cash (including money market accounts and certificates of deposit)	2b(1)(A)		
(B) U.S. Government securities	2b(1)(B)		
(C) Corporate debt instruments	2b(1)(C)		
(D) Loans (other than to participants)	2b(1)(D)		
(E) Participant loans	2b(1)(E)	2391	
(F) Other	2b(1)(F)	24419	
(G) Total interest. Add lines 2b(1)(A) through (F)	2b(1)(G)		26810
(2) Dividends: (A) Preferred stock	2b(2)(A)		
(B) Common stock	2b(2)(B)		
(C) Registered investment company shares (e.g. mutual funds)	2b(2)(C)	1446504	
(D) Total dividends. Add lines 2b(2)(A) , (B) , and (C)	2b(2)(D)		1446504
(3) Rents	2b(3)		
(4) Net gain (loss) on sale of assets: (A) Aggregate proceeds	2b(4)(A)		
(B) Aggregate carrying amount (see instructions)	2b(4)(B)		
(C) Subtract line 2b(4)(B) from line 2b(4)(A) and enter result	2b(4)(C)		0
(5) Unrealized appreciation (depreciation) of assets: (A) Real estate	2b(5)(A)		
(B) Other	2b(5)(B)		
(C) Total unrealized appreciation of assets. Add lines 2b(5)(A) and (B)	2b(5)(C)		0

		(a) Amount	(b) Total
(6) Net investment gain (loss) from common/collective trusts	2b(6)		
(7) Net investment gain (loss) from pooled separate accounts	2b(7)		
(8) Net investment gain (loss) from master trust investment accounts	2b(8)		
(9) Net investment gain (loss) from 103-12 investment entities.....	2b(9)		
(10) Net investment gain (loss) from registered investment companies (e.g., mutual funds)	2b(10)		-6161890
c Other income	2c		
d Total income. Add all income amounts in column (b) and enter total	2d		-3865777
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	2221683	
(2) To insurance carriers for the provision of benefits	2e(2)		
(3) Other	2e(3)		
(4) Total benefit payments. Add lines 2e(1) through (3)	2e(4)		2221683
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions)	2g		
h Interest expense	2h		
i Administrative expenses: (1) Professional fees	2i(1)	1137	
(2) Contract administrator fees	2i(2)		
(3) Investment advisory and management fees	2i(3)		
(4) Other	2i(4)		
(5) Total administrative expenses. Add lines 2i(1) through (4)	2i(5)		1137
j Total expenses. Add all expense amounts in column (b) and enter total	2j		2222820
Net Income and Reconciliation			
k Net income (loss). Subtract line 2j from line 2d	2k		-6088597
l Transfers of assets:			
(1) To this plan	2l(1)		
(2) From this plan	2l(2)		

Part III Accountant's Opinion

3 Complete lines 3a through 3c if the opinion of an independent qualified public accountant is attached to this Form 5500. Complete line 3d if an opinion is not attached.

a The attached opinion of an independent qualified public accountant for this plan is (see instructions):

(1) ☒ Unmodified (2) ☐ Qualified (3) ☐ Disclaimer (4) ☐ Adverse

b Check the appropriate box(es) to indicate whether the IQPA performed an ERISA section 103(a)(3)(C) audit. Check both boxes (1) and (2) if the audit was performed pursuant to both 29 CFR 2520.103-8 and 29 CFR 2520.103-12(d). Check box (3) if pursuant to neither.

(1) ☒ DOL Regulation 2520.103-8 (2) ☐ DOL Regulation 2520.103-12(d) (3) ☐ neither DOL Regulation 2520.103-8 nor DOL Regulation 2520.103-12(d).

c Enter the name and EIN of the accountant (or accounting firm) below:

(1) Name: **PKF O'CONNOR DAVIES, LLP**

(2) EIN: **27-1728945**

d The opinion of an independent qualified public accountant is **not attached** because:

(1) ☐ This form is filed for a CCT, PSA, or MTIA. (2) ☐ It will be attached to the next Form 5500 pursuant to 29 CFR 2520.104-50.

Part IV Compliance Questions

4 CCTs and PSAs do not complete Part IV. MTIAs, 103-12 IEs, and GIAs do not complete lines 4a, 4e, 4f, 4g, 4h, 4k, 4m, 4n, or 5. 103-12 IEs also do not complete lines 4j and 4l. MTIAs also do not complete line 4l.

During the plan year:

a Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program.)

	Yes	No	Amount
4a		X	

	Yes	No	Amount
b Were any loans by the plan or fixed income obligations due the plan in default as of the close of the plan year or classified during the year as uncollectible? Disregard participant loans secured by participant's account balance. (Attach Schedule G (Form 5500) Part I if "Yes" is checked.)			
4b		X	
c Were any leases to which the plan was a party in default or classified during the year as uncollectible? (Attach Schedule G (Form 5500) Part II if "Yes" is checked.)			
4c		X	
d Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 4a. Attach Schedule G (Form 5500) Part III if "Yes" is checked.)			
4d		X	
e Was this plan covered by a fidelity bond?	X		1000000
f Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?		X	
4f		X	
g Did the plan hold any assets whose current value was neither readily determinable on an established market nor set by an independent third party appraiser?			
4g		X	
h Did the plan receive any noncash contributions whose value was neither readily determinable on an established market nor set by an independent third party appraiser?			
4h		X	
i Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.)	X		
4i	X		
j Were any plan transactions or series of transactions in excess of 5% of the current value of plan assets? (Attach schedule of transactions if "Yes" is checked and see instructions for format requirements.)			
4j		X	
k Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?			
4k		X	
l Has the plan failed to provide any benefit when due under the plan?			
4l		X	
m If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)			
4m		X	
n If 4m was answered "Yes," check the "Yes" box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3.			
4n			

5a Has a resolution to terminate the plan been adopted during the plan year or any prior plan year? ☐ Yes ☒ No
If "Yes," enter the amount of any plan assets that reverted to the employer this year _____.

5b If, during this plan year, any assets or liabilities were transferred from this plan to another plan(s), identify the plan(s) to which assets or liabilities were transferred. (See instructions.)

5b(1) Name of plan(s)	5b(2) EIN(s)	5b(3) PN(s)

5c Was the plan a defined benefit plan covered under the PBGC insurance program at any time during this plan year? (See ERISA section 4021 and instructions.) ☐ Yes ☐ No ☐ Not determined
If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year _____.

SCHEDULE R (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Retirement Plan Information This schedule is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6058(a) of the Internal Revenue Code (the Code). ► File as an attachment to Form 5500.	OMB No. 1210-0110 2022 This Form is Open to Public Inspection.
For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022		
A Name of plan ARROWSTREET INC. 401K PROFIT SHARING		B Three-digit plan number (PN) ► 001
C Plan sponsor's name as shown on line 2a of Form 5500 ARROWSTREET, INC.		D Employer Identification Number (EIN) 04-2323820
Part I	Distributions	
All references to distributions relate only to payments of benefits during the plan year.		
1 Total value of distributions paid in property other than in cash or the forms of property specified in the instructions.....		1 0
2 Enter the EIN(s) of payor(s) who paid benefits on behalf of the plan to participants or beneficiaries during the year (if more than two, enter EINs of the two payors who paid the greatest dollar amounts of benefits): EIN(s): 04-1590850 84-0467907		
Profit-sharing plans, ESOPs, and stock bonus plans, skip line 3.		
3 Number of participants (living or deceased) whose benefits were distributed in a single sum, during the plan year.....		3
Part II	Funding Information (If the plan is not subject to the minimum funding requirements of section 412 of the Internal Revenue Code or ERISA section 302, skip this Part.)	
4 Is the plan administrator making an election under Code section 412(d)(2) or ERISA section 302(d)(2)? ☐ Yes ☐ No ☐ N/A If the plan is a defined benefit plan, go to line 8.		
5 If a waiver of the minimum funding standard for a prior year is being amortized in this plan year, see instructions and enter the date of the ruling letter granting the waiver. Date: Month _____ Day _____ Year _____ If you completed line 5, complete lines 3, 9, and 10 of Schedule MB and do not complete the remainder of this schedule.		
6 a Enter the minimum required contribution for this plan year (include any prior year accumulated funding deficiency not waived).....		6a
b Enter the amount contributed by the employer to the plan for this plan year.....		6b
c Subtract the amount in line 6b from the amount in line 6a. Enter the result (enter a minus sign to the left of a negative amount).....		6c
If you completed line 6c, skip lines 8 and 9.		
7 Will the minimum funding amount reported on line 6c be met by the funding deadline? ☐ Yes ☐ No ☐ N/A		
8 If a change in actuarial cost method was made for this plan year pursuant to a revenue procedure or other authority providing automatic approval for the change or a class ruling letter, does the plan sponsor or plan administrator agree with the change? ☐ Yes ☐ No ☐ N/A		
Part III	Amendments	
9 If this is a defined benefit pension plan, were any amendments adopted during this plan year that increased or decreased the value of benefits? If yes, check the appropriate box. If no, check the "No" box..... ☐ Increase ☐ Decrease ☐ Both ☐ No		
Part IV	ESOPs (see instructions). If this is not a plan described under section 409(a) or 4975(e)(7) of the Internal Revenue Code, skip this Part.	
10 Were unallocated employer securities or proceeds from the sale of unallocated securities used to repay any exempt loan?..... ☐ Yes ☐ No		
11 a Does the ESOP hold any preferred stock?..... ☐ Yes ☐ No		
b If the ESOP has an outstanding exempt loan with the employer as lender, is such loan part of a "back-to-back" loan? (See instructions for definition of "back-to-back" loan.)..... ☐ Yes ☐ No		
12 Does the ESOP hold any stock that is not readily tradable on an established securities market?..... ☐ Yes ☐ No		
For Paperwork Reduction Act Notice, see the Instructions for Form 5500.		
Schedule R (Form 5500) 2022 v. 220413		

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that (1) contributed more than 5% of total contributions to the plan during the plan year or (2) was one of the top-ten highest contributors (measured in dollars). See instructions. *Complete as many entries as needed to report all applicable employers.*

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

14	Enter the number of deferred vested and retired participants (inactive participants), as of the beginning of the plan year, whose contributing employer is no longer making contributions to the plan for:		
	a The current plan year. Check the box to indicate the counting method used to determine the number of inactive participants: ☐ last contributing employer ☐ alternative ☐ reasonable approximation (see instructions for required attachment).....	14a	
	b The plan year immediately preceding the current plan year. ☐ Check the box if the number reported is a change from what was previously reported (see instructions for required attachment)	14b	
	c The second preceding plan year. ☐ Check the box if the number reported is a change from what was previously reported (see instructions for required attachment)	14c	
15	Enter the ratio of the number of participants under the plan on whose behalf no employer had an obligation to make an employer contribution during the current plan year to:		
	a The corresponding number for the plan year immediately preceding the current plan year.....	15a	
	b The corresponding number for the second preceding plan year.....	15b	
16	Information with respect to any employers who withdrew from the plan during the preceding plan year:		
	a Enter the number of employers who withdrew during the preceding plan year	16a	
	b If line 16a is greater than 0, enter the aggregate amount of withdrawal liability assessed or estimated to be assessed against such withdrawn employers.....	16b	
17	If assets and liabilities from another plan have been transferred to or merged with this plan during the plan year, check box and see instructions regarding supplemental information to be included as an attachment ☐		

Part VI	Additional Information for Single-Employer and Multiemployer Defined Benefit Pension Plans
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18	If any liabilities to participants or their beneficiaries under the plan as of the end of the plan year consist (in whole or in part) of liabilities to such participants and beneficiaries under two or more pension plans as of immediately before such plan year, check box and see instructions regarding supplemental information to be included as an attachment ☐
19	If the total number of participants is 1,000 or more, complete lines (a) through (c) a Enter the percentage of plan assets held as: Stock: _____% Investment-Grade Debt: _____% High-Yield Debt: _____% Real Estate: _____% Other: _____% b Provide the average duration of the combined investment-grade and high-yield debt: ☐ 0-3 years ☐ 3-6 years ☐ 6-9 years ☐ 9-12 years ☐ 12-15 years ☐ 15-18 years ☐ 18-21 years ☐ 21 years or more c What duration measure was used to calculate line 19(b)? ☐ Effective duration ☐ Macaulay duration ☐ Modified duration ☐ Other (specify): _____
20	PBGC missed contribution reporting requirements. If this is a multiemployer plan or a single-employer plan that is not covered by PBGC, skip line 20. a Is the amount of unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40 greater than zero? ☐ Yes ☐ No b If line 20a is "Yes," has PBGC been notified as required by ERISA sections 4043(c)(5) and/or 303(k)(4)? Check the applicable box: ☐ Yes. ☐ No. Reporting was waived under 29 CFR 4043.25(c)(2) because contributions equal to or exceeding the unpaid minimum required contribution were made by the 30th day after the due date. ☐ No. The 30-day period referenced in 29 CFR 4043.25(c)(2) has not yet ended, and the sponsor intends to make a contribution equal to or exceeding the unpaid minimum required contribution by the 30th day after the due date. ☐ No. Other. Provide explanation _____

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Financial Statements

December 31, 2022 and 2021

Independent Auditors' Report

The Plan Administrator and Participants Arrowstreet, Inc. 401(k) Profit Sharing Retirement Plan

Scope and Nature of the ERISA Section 103(a)(3)(C) Audit

We have performed audits of the accompanying financial statements of the Arrowstreet, Inc. 401(k) Profit Sharing Retirement Plan (the "Plan"), an employee benefit plan subject to the Employee Retirement Income Security Act of 1974 ("ERISA"), as permitted by ERISA Section 103(a)(3)(C) ("ERISA Section 103(a)(3)(C) audit"). The financial statements comprise the statements of net assets available for benefits as of December 31, 2022 and 2021, and the related statement of changes in net assets available for benefits for the year ended December 31, 2022, and the related notes to the financial statements.

Management, having determined it is permissible in the circumstances, has elected to have the audits of the Plan's financial statements performed in accordance with ERISA Section 103(a)(3)(C) pursuant to 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. As permitted by ERISA Section 103(a)(3)(C), our audits need not extend to any statements or information related to assets held for investment of the Plan ("investment information") by a bank or similar institution or insurance carrier that is regulated, supervised, and subject to periodic examination by a state or federal agency, provided that the statements or information regarding assets so held are prepared and certified to by the bank or similar institution or insurance carrier in accordance with 29 CFR 2520.103-5 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA ("qualified institution").

Management has obtained certifications from qualified institutions as of December 31, 2022 and 2021, and for the year ended December 31, 2022, stating that the certified investment information, as described in Note 3 to the financial statements, is complete and accurate.

Opinion

In our opinion, based on our audits and on the procedures performed as described in the Auditors' Responsibilities for the Audit of the Financial Statements section:

- The amounts and disclosures in the financial statements referred to above, other than those agreed to or derived from the certified investment information, are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America.
- The information in the financial statements referred to above related to assets held by and certified to by qualified institutions agrees to, or is derived from, in all material respects, the information prepared and certified by an institution that management determined meets the requirements of ERISA Section 103(a)(3)(C).

PKF O'CONNOR DAVIES, LLP

155 Federal Street, Suite 200, Boston, MA 02110 | Tel: 781.937.5300 | Fax: 781.937.5100 | pkfod.com

PKF O'Connor Davies, LLP is a member firm of the PKF International Limited network of legally independent firms and does not accept any responsibility or liability for the actions or inactions on the part of any other individual member firm or firms.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America ("GAAS"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Plan and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our ERISA Section 103(a)(3)(C) audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error. Management's election of the ERISA Section 103(a)(3)(C) audit does not affect management's responsibility for the financial statements.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Plan's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

Management is also responsible for maintaining a current plan instrument, including all plan amendments, administering the Plan, and determining that the Plan's transactions that are presented and disclosed in the financial statements are in conformity with the Plan's provisions, including maintaining sufficient records with respect to each of the participants, to determine the benefits due or which may become due to such participants.

Auditors' Responsibilities for the Audit of the Financial Statements

Except as described in the Scope and Nature of the ERISA Section 103(a)(3)(C) Audit section of our report, our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if, there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

The Plan Administrator and Participants
Arrowstreet, Inc. 401(k) Profit Sharing Retirement Plan
Page 3

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Plan's ability to continue as a going concern for a reasonable period of time.

Our audits did not extend to the certified investment information, except for obtaining and reading the certification, comparing the certified investment information with the related information presented and disclosed in the financial statements, and reading the disclosures relating to the certified investment information to assess whether they are in accordance with the presentation and disclosure requirements of accounting principles generally accepted in the United States of America.

Accordingly, the objective of an ERISA Section 103(a)(3)(C) audit is not to express an opinion about whether the financial statements as a whole are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Supplemental Schedules Required by ERISA

The supplemental Schedule H, Part IV, Line 4(i) - Schedule of Assets (Held at End of Year) as of December 31, 2022 is presented for purposes of additional analysis and is not a required part of the financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information included in the supplemental schedule, other than that agreed to or derived from the certified investment information, has been subjected to auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with GAAS. For information included in the supplemental schedule that agreed to or is derived from the certified investment information, we compared such information to the related certified investment information.

In forming our opinion on the supplemental schedule, we evaluated whether the supplemental schedule, other than the information agreed to or derived from the certified investment information, including their form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA.

In our opinion:

- The form and content of the supplemental schedule, other than the information in the supplemental schedule that agreed to or is derived from the certified investment information, is presented, in all material respects, in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA.
- The information in the supplemental schedule related to assets held by and certified to by qualified institutions agrees to, or is derived from, in all material respects, the information prepared and certified by institutions that management determined meets the requirements of ERISA Section 103(a)(3)(C).

PKF O'Connor Davies, LLP

Boston, Massachusetts
October 5, 2023

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Statements of Net Assets Available for Benefits

	December 31,	
	2022	2021
ASSETS		
Investments		
Mutual funds, at fair value	\$ 16,349,586	\$ 22,853,627
Guaranteed interest account, at contract value	2,083,263	1,625,945
Total Investments	<u>18,432,849</u>	<u>24,479,572</u>
Receivables		
Notes receivable from participants	17,064	57,077
Employer profit sharing contribution	80,593	82,454
Total Receivables	<u>97,657</u>	<u>139,531</u>
Total Assets	18,530,506	24,619,103
LIABILITIES	-	-
Net Assets Available for Benefits	<u>\$ 18,530,506</u>	<u>\$ 24,619,103</u>

See Notes to Financial Statements

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Statement of Changes in Net Assets Available for Benefits
Year Ended December 31, 2022

ADDITIONS

Contributions	
Participant deferrals	\$ 742,207
Employer profit sharing	<u>80,593</u>
Total Contributions	<u>822,800</u>
Investment (Loss) Income	
Net depreciation in fair value of investments	(6,161,888)
Interest and dividends	1,446,504
Interest income from guaranteed interest account	<u>24,419</u>
Total Investment Loss	<u>(4,690,965)</u>
Interest income on notes receivable from participants	<u>2,389</u>
Total Additions, Net of Investment Loss	<u>(3,865,776)</u>

DEDUCTIONS

Benefits paid to participants	2,221,684
Administrative expenses	<u>1,137</u>
Total Deductions	<u>2,222,821</u>
Net Decrease	(6,088,597)

NET ASSETS AVAILABLE FOR BENEFITS

Beginning of year	<u>24,619,103</u>
End of year	<u>\$ 18,530,506</u>

See Notes to Financial Statements

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Notes to Financial Statements
December 31, 2022 and 2021

1. Description of the Plan

The following description of the Arrowstreet, Inc. 401(k) Profit Sharing Retirement Plan (the “Plan”) is provided for general information purposes only. More complete information regarding the Plan’s provisions may be found in the Plan document.

General

The Plan is a defined contribution profit sharing plan with a cash deferred arrangement covering all employees of Arrowstreet, Inc. (the “Employer”), except for non-resident aliens who have no earned income from sources within the United States and those employees whose employment is governed by a collective bargaining agreement (“Participants”). Employees may enter the Plan on the first day of employment.

Effective January 1, 2022, Empower Annuity Insurance Company of America and Empower Trust Company, LLC (collectively “Empower”) provides trustee and asset custodian services to the Plan. Reliance Trust Company (“Trustee”) and Great-West Life & Annuity Insurance Company (“Insurance Company”) provided trustee and asset custodian services to the Plan as of December 31, 2021. Empower Retirement, LLC provides recordkeeping services.

The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (“ERISA”). All investments are Participant-directed.

Plan Administration

The Employer is the plan administrator and has the authority to appoint person(s) or entities to carry out the operation of the Plan. Individual Participant accounts may be charged with an allocation of administrative expenses, if not paid by the Employer. Individual Participant accounts are charged directly for loan recordkeeping, if applicable.

Participant Contributions

Each year, Participants may defer up to 100% of their eligible compensation as defined by the Plan, up to a dollar limit established under the Internal Revenue Code (the “Code”). Participants may make pre-tax or Roth contributions to their accounts. Participants who have attained age 50 before the end of the Plan year are eligible to make catch-up contributions. Participants may also contribute amounts representing distributions from other qualified plans (“Participant Rollovers”).

Employees, upon eligibility to participate in the Plan, are automatically enrolled to defer 5% of their eligible compensation, as defined. A Participant may choose not to defer or may choose a different percentage once enrolled. A Participant’s deferral rate is automatically increased on an annual basis by one percentage point up to a maximum of 8%. Automatic enrollment deferrals are invested in the applicable lifecycle fund based on the employee’s birth date. The automatic pre-tax deferral election, automatic deferral escalation, and the default investment option remain in effect until the Participant changes them.

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Notes to Financial Statements
December 31, 2022 and 2021

1. Description of the Plan (*continued*)

Employer Contributions

Employer Matching Contributions

The Employer may make matching contributions equal to a discretionary percentage of the Participants' elective deferral as determined by the Board of Directors annually. The annual maximum employer matching contribution is \$2,000 per Participant. To be eligible for employer matching contributions Participants must have attained 21 years of age, completed at least one year of service (defined as twelve consecutive months worked) and be employed by the Employer on the last day of the Plan year unless their employment has terminated due to death, total and permanent disability, or retirement, as defined by the Plan. For the year ended December 31, 2022, the Employer elected not to make an employer matching contribution.

Employer Profit Sharing Contributions

The Employer may elect to make a discretionary profit sharing contribution as determined by the Board of Directors annually. To be eligible for Employer profit sharing contributions Participants must have attained 21 years of age, completed at least one year of service (defined as twelve consecutive months worked) and be employed by the Employer on the last day of the Plan year, unless their employment has terminated due to death, total and permanent disability, or retirement, as defined by the Plan. Profit sharing contributions are allocated among all eligible Participants based on employee classification, as defined in the Plan. For the year ended December 31, 2022, the Employer elected to make a discretionary profit sharing contribution in the amount of \$80,593. The amount was funded to the Plan during 2023.

Participant Accounts

Each Participant's account is credited with the Participant's deferral contributions, their respective employer contributions, an allocation of the Plan's investment earnings and losses, and is charged with an allocation of certain administrative expenses, if applicable. Allocations are based on Participants compensation or account balances, as defined. The benefit to which a Participant is entitled is the benefit that can be provided from the Participant's vested account balance.

Vesting

Participants are immediately vested in all contributions and the investment earnings thereon.

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Notes to Financial Statements
December 31, 2022 and 2021

1. Description of the Plan (continued)

Notes Receivable from Participants

Subject to approval by the plan administrator, Participants may borrow from their vested accounts a minimum of \$1,000 up to a maximum equal to the lesser of \$50,000 or 50% of their vested account balance, both reduced by any outstanding loan balance. Loan terms range from one to five years (or longer for the purchase of a primary residence). A Participant may have up to two loans outstanding at a time. Loans are secured by the vested balance in the Participant's account and bear interest at a rate commensurate with local prevailing rates as determined by the plan administrator. Loans are considered due and payable upon termination of employment. Principal and interest are paid ratably through payroll deductions. If a Participant ceases to make loan repayments and the plan administrator deems the loan to be in default, the Participant's loan balance is reduced, and a benefit payment is recorded as soon as a distributable event occurs. Interest rates on loans outstanding at December 31, 2022 and 2021 range from 5.25% to 7.00%, and mature at various dates through December 2031.

Payment of Benefits

Participants are entitled to their vested account balance upon death, disability, retirement, or termination of employment. A Participant may elect to receive either a lump-sum amount equal to the value of his or her account or installment payments of such amounts, frequency, and duration as the Participant or beneficiary may elect. The payment can either be a cash distribution to the Participant or beneficiary, subject to income tax withholdings, a tax-free rollover into an Individual Retirement Account ("IRA") or another qualified plan. Upon termination, if a Participant's account balance is less than \$1,000, the plan administrator, after notification, may distribute to the Participant his or her entire account balance. If a balance is less than \$5,000 but greater than \$1,000 the plan administrator, after notification, may deposit the balance into an individual retirement account.

In-service withdrawals are allowed from a Participant's contribution and rollover accounts at any time. In-service withdrawals upon reaching age 59 $\frac{1}{2}$ are allowed from all Participant's accounts. Hardship withdrawals may be taken from the Participant's elective deferral account and rollover account if certain criteria are met.

Forfeited Accounts

A Participant who leaves the employment of the Employer forfeits any non-vested balance. Non-vested balances relate to employer contributions from prior periods. Forfeited balances of terminated Participants' accounts are first used to pay administrative expenses and then to reduce Employer contributions in the year of forfeiture. At December 31, 2022 and 2021, unused forfeiture balances amounted to \$901 and \$878, respectively.

Administrative Expenses

Expenses resulting from participant loans, certain investment fees, and fees related to distributions are deducted directly from participant accounts. All other administrative expenses are paid by the Employer, which are not reflected in these financial statements.

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Notes to Financial Statements
December 31, 2022 and 2021

2. Summary of Significant Accounting Policies

Basis of Accounting

The accompanying financial statements have been prepared on the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America ("GAAP").

Use of Estimates

The preparation of financial statements in conformity with GAAP requires plan management to make estimates and assumptions that affect the reported amounts in the financial statements and accompanying notes. Actual results could differ from these estimates.

Investments, Investment Valuation, and Income Recognition

The Plan follows GAAP guidance on *Fair Value Measurements* which defines fair value and establishes a fair value hierarchy organized into three levels based upon the input assumptions used in pricing assets. Level 1 inputs have the highest reliability and are related to assets with unadjusted quoted prices in active markets. Level 2 inputs relate to assets with other than quoted prices in active markets which may include quoted prices for similar assets or liabilities or other inputs which can be corroborated by observable market data. Level 3 inputs are unobservable and are used to the extent that observable inputs do not exist.

Guaranteed interest account: The Plan has a guaranteed interest account contract with Empower. The guaranteed interest account is reported at contract value. Contract value is the relevant measurement attribute to fully benefit-responsive investment contracts because contract value is the amount Participants would receive if they were to initiate permitted transactions under the terms of the Plan. See Note 4 for information on the guaranteed interest account.

Mutual funds: As of December 31, 2022 and 2021, mutual funds amounted to \$16,349,586 and \$22,853,627, and are valued at the daily closing price as reported by the fund. Mutual funds held by the Plan are open-end mutual funds that are registered with the Securities Exchange Commission. These funds are required to publish their daily net asset value ("NAV") and to transact at that price. These mutual funds held by the Plan are deemed to be actively traded and are classified as Level 1 investments.

Investments are reported at fair value except for the fully benefit-responsive investment contract, which is reported at contract value, see Note 4 for discussion of the investment contract. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Purchases and sales of securities are recorded on a trade-date basis. Net depreciation in fair value of investments includes the Plan's gains and losses on investments bought and sold, as well as held during the year. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Notes to Financial Statements
December 31, 2022 and 2021

2. Summary of Significant Accounting Policies (*continued*)

Notes Receivable from Participants

Notes receivable from Participants are measured at their unpaid principal balance plus any accrued but unpaid interest. Interest income on notes receivable from Participants is recognized on the accrual basis of accounting. Related fees are recorded as administrative expenses and are expensed when incurred. No allowance for credit losses has been recorded as of December 31, 2022 and 2021.

Payments of Benefits

Benefits payments to participants are recorded during the period in which the Participant is paid.

3. Information Certified (Unaudited)

Certain information related to investments and notes receivable from participants disclosed in the accompanying financial statements and ERISA-required Schedule H, Part IV, Line 4i – Schedule of Assets (Held at End of Year) including investments and notes receivable from participants held at December 31, 2022 and 2021, and net depreciation in value of investments, interest and dividends on investments, interest income on guaranteed interest account, and interest on notes receivable from participants for the year ended December 31, 2021, was obtained by management and agreed to or derived from information certified as complete and accurate by Empower, Trustee, and Insurance Company, qualified institutions.

4. Group Annuity Contract with Insurance Company

The Plan has a fully benefit-responsive group annuity contract (“GAC”) with the Insurance Company. The Insurance Company maintains the contributions in a general account. The account is credited with earnings on the underlying investments and charged for Participant withdrawals and administrative expenses. The GAC issuer is contractually obligated to repay the principal and a specified interest rate that is guaranteed to the Plan. Participants invest in the GAC through a guaranteed interest account.

Since the GAC is fully benefit-responsive, contract value is the relevant measurement attribute for that portion of the net assets available for benefits attributable to the GAC. Contract value, as reported to the Plan by the Insurance Company, represents contributions made under the contract, plus earnings, less Participant withdrawals and administrative expenses. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value.

There are no reserves against contract value for credit risk of the contract issuer or otherwise. The average yield and crediting interest rate for the year ended December 31, 2022 was 1.00%. The crediting interest rate is based on a formula agreed upon with the Trustee. Such interest rates are reviewed on an annual basis for resetting.

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Notes to Financial Statements
December 31, 2022 and 2021

4. Group Annuity Contract with Insurance Company (*continued*)

Certain events limit the ability of the Plan to transact at contract value with the Insurance Company. Such events include the following: (i) amendments to the Plan documents (including complete or partial plan termination or merger with another plan), (ii) changes to the Plan's prohibition on competing investment options or deletion of equity wash provisions, (iii) bankruptcy of the plan sponsor or other plan sponsor events (for example, divestitures or spin-offs of a subsidiary) that cause significant withdrawal from the Plan, or (iv) the failure of the trust to qualify for exemption from federal income taxes or any required prohibited transaction exemption under ERISA. The plan administrator does not believe that any events which would limit the Plan's ability to transact at contract value with plan Participants are probable of occurring.

In addition, certain events allow the issuer to terminate the contract with the Plan and settle at an amount different from contract value. Such events include (i) certain instances of a participant termination of employment as listed in the contract, (ii) removal from the Plan of one or more groups or classifications of participants, (iii) partial or complete plan termination, or (iv) plan disqualification.

5. Risk and Uncertainties

The Plan invests in investment securities which are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and such changes could materially affect Participants' account balances and the amounts reported in the statements of net assets available for benefits.

The global and economic uncertainty has resulted in significant volatility in financial markets. This volatility has affected, and may continue to affect, the value of the Plan's net assets available for benefits. The effect of economic and market conditions subsequent to December 31, 2022 are not reflected in these financial statements and future effects on the Plan's net assets available for benefits cannot be predicted.

6. Party-In-Interest Transactions

Plan investments include a guaranteed interest account managed by Empower and, therefore, these transactions qualify as exempt party-in-interest transactions. Administrative fees of \$1,137 were paid to Empower during 2022. Notes receivable from Participants also qualify as exempt party-in-interest transactions as defined by ERISA. The employer pays directly for any other fees related to the Plan's operations.

7. Plan Termination

Although it has not expressed any intent to do so, the Employer has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA. In the event of Plan termination, any unallocated assets of the Plan shall be allocated to Participant accounts and distributed in such a manner as the employer may determine.

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Notes to Financial Statements
December 31, 2022 and 2021

8. Tax Status

The underlying volume submitter profit sharing plan had received an opinion letter from the Internal Revenue Service ("IRS") dated June 30, 2020, in which the IRS stated that the form of the plan is qualified under Section 401(a) of the Code, was in compliance with the applicable requirements of the Code. Any employer adopting this form of the plan will be considered to have a plan qualified under Section 401(a) of the Code. The Plan has been amended since receiving the opinion letter; however, the plan administrator believes the Plan is currently designed and being operated in compliance with the applicable requirements of the Code and that the Plan is qualified and the related trust is tax-exempt as of the date of this report.

GAAP requires plan management to evaluate tax positions taken by the Plan and recognize a tax liability (or asset) if the organization has taken an uncertain position that more likely than not would not be sustained upon examination by the taxing authorities. It is the Plan's policy to account for any uncertainties as described under the income tax laws. Under the income tax laws, the tax-exempt status of an entity is considered a tax position. No such uncertain tax positions have been recognized by the Plan.

The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The plan administrator believes it is no longer subject to income tax examinations for years prior to 2019.

9. Subsequent Events

The Plan administrator has evaluated subsequent events through October 5, 2023, the date the financial statements were available to be issued, and determined that there have been no subsequent events, that would require recognition in, or disclosure in the notes to, the financial statements.

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

Supplemental Schedule

December 31, 2022

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

December 31, 2022

Schedule H, Pat IV, Line 4(i) - Schedule of Assets (Held at End of Year)

EIN: 04-2323820
Plan No. 001

(a)	(b) Identity of issue, borrower, lessor, or similar party	(c) Description of investment	(d) Cost	(e) Current value
	MUTUAL FUNDS	SHARES/UNITS		
	T. Rowe Price Blue Chip Growth	15,591	**	\$ 1,613,851
	MassMutual S&P 500(R) Index I	113,740	**	1,478,614
	Putnam Dynamic Asset Allocation Growth A	93,004	**	1,453,657
	Fidelity Advisor Technology I	16,717	**	1,166,516
	Columbia Dividend Income Instl 2	31,165	**	917,804
	JP Morgan SmartRetirement 2045 I	51,968	**	880,855
	Columbia Small Cap Index Instl 2	34,743	**	800,479
	Putnam Dynamic Asset Allocation Bal A	54,010	**	722,112
	JP Morgan SmartRetirement 2050 I	41,084	**	703,354
	MassMutual Mid Cap Growth Administrative	45,119	**	675,437
	JP Morgan SmartRetirement 2030 I	36,033	**	564,277
	JP Morgan US Equity I	32,003	**	546,287
	JP Morgan SmartRetirement 2055 I	26,177	**	540,036
	MFS International Intrinsic Value R4	14,459	**	515,913
	JP Morgan SmartRetirement 2035 I	28,532	**	459,941
	MassMutual High Yield Service	60,444	**	453,333
	T. Rowe Price Health Sciences	4,434	**	398,293
	American Funds Europacific Gr R4	8,228	**	393,699
	JP Morgan SmartRetirement 2040 I	20,556	**	352,334
	PGIM Total Return Bond Z	27,476	**	322,296
	PIMCO Real Return Admin	26,829	**	268,021
	Fidelity Mid Cap Index	8,411	**	218,005
	Virtus Duff & Phelps Real Estate Sec I	10,914	**	203,651
	Calvert US Large Cap Core Rspnb Idx I	4,352	**	144,146
	Virtus Ceredex Mid-Cap Value Equity I	12,771	**	137,417
	Invesco Developing Markets Y	3,727	**	130,311
	BlackRock Strategic Global Bond Instl	20,990	**	107,679
	Vanguard Energy Fund	1,595	**	72,826
	JP Morgan SmartRetirement Income I	2,394	**	32,603
	Putnam Dynamic Asset Allocation Con A	3,465	**	32,430
	Davis Financial A	597	**	28,477
	MassMutual US Government Mny Mkt Fd	12,964	**	12,964
	JP Morgan SmartRetirement 2025 I	135	**	1,968
				16,349,586
	GUARANTEED INTEREST ACCOUNT			
*	MassMutual Life Insurance Company Guaranteed Interest Account	Guaranteed Interest Account	**	2,083,263
		Interest rates (5.25% - 7.00%) and maturity dates through 2031	-0-	17,064
*	Notes Receivable from Participants			17,064
				\$ 18,449,913

* Represents party-in-interest as defined by ERISA.

** Cost information is not required for participant-directed investments and therefore has not been included.

See Independent Auditors' Report

Arrowstreet, Inc.
401(k) Profit Sharing Retirement Plan

December 31, 2022

Schedule H, Pat IV, Line 4(i) - Schedule of Assets (Held at End of Year)

EIN: 04-2323820
Plan No. 001

(a)	(b) Identity of issue, borrower, lessor, or similar party	(c) Description of investment	(d) Cost	(e) Current value
	MUTUAL FUNDS	SHARES/UNITS		
	T. Rowe Price Blue Chip Growth	15,591	**	\$ 1,613,851
	MassMutual S&P 500(R) Index I	113,740	**	1,478,614
	Putnam Dynamic Asset Allocation Growth A	93,004	**	1,453,657
	Fidelity Advisor Technology I	16,717	**	1,166,516
	Columbia Dividend Income Instl 2	31,165	**	917,804
	JP Morgan SmartRetirement 2045 I	51,968	**	880,855
	Columbia Small Cap Index Instl 2	34,743	**	800,479
	Putnam Dynamic Asset Allocation Bal A	54,010	**	722,112
	JP Morgan SmartRetirement 2050 I	41,084	**	703,354
	MassMutual Mid Cap Growth Administrative	45,119	**	675,437
	JP Morgan SmartRetirement 2030 I	36,033	**	564,277
	JP Morgan US Equity I	32,003	**	546,287
	JP Morgan SmartRetirement 2055 I	26,177	**	540,036
	MFS International Intrinsic Value R4	14,459	**	515,913
	JP Morgan SmartRetirement 2035 I	28,532	**	459,941
	MassMutual High Yield Service	60,444	**	453,333
	T. Rowe Price Health Sciences	4,434	**	398,293
	American Funds Europacific Gr R4	8,228	**	393,699
	JP Morgan SmartRetirement 2040 I	20,556	**	352,334
	PGIM Total Return Bond Z	27,476	**	322,296
	PIMCO Real Return Admin	26,829	**	268,021
	Fidelity Mid Cap Index	8,411	**	218,005
	Virtus Duff & Phelps Real Estate Sec I	10,914	**	203,651
	Calvert US Large Cap Core Rspnb Idx I	4,352	**	144,146
	Virtus Ceredex Mid-Cap Value Equity I	12,771	**	137,417
	Invesco Developing Markets Y	3,727	**	130,311
	BlackRock Strategic Global Bond Instl	20,990	**	107,679
	Vanguard Energy Fund	1,595	**	72,826
	JP Morgan SmartRetirement Income I	2,394	**	32,603
	Putnam Dynamic Asset Allocation Con A	3,465	**	32,430
	Davis Financial A	597	**	28,477
	MassMutual US Government Mny Mkt Fd	12,964	**	12,964
	JP Morgan SmartRetirement 2025 I	135	**	1,968
				16,349,586
	GUARANTEED INTEREST ACCOUNT			
*	MassMutual Life Insurance Company Guaranteed Interest Account	Guaranteed Interest Account	**	2,083,263
		Interest rates (5.25% - 7.00%) and maturity dates through 2031	-0-	17,064
				\$ 18,449,913

* Represents party-in-interest as defined by ERISA.

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