

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 01/01/2022 and ending 12/31/2022	
A	This return/report is for: ☐ a multiemployer plan ☒ a single-employer plan ☐ a multiple-employer plan (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.) ☐ 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 ASM RESEARCH LLC 401(K) PLAN
1b	Three-digit plan number (PN) ▶ 002
1c	Effective date of plan 01/01/1994
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) ASM RESEARCH LLC 4050 LEGATO RD SUITE 1100 FAIRFAX, VA 22033-2895
2b	Employer Identification Number (EIN) 54-1385056
2c	Plan Sponsor's telephone number 703-830-0856
2d	Business code (see instructions) 541512

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.	08/07/2023	JOHN FRASER
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE	Filed with authorized/valid electronic signature.	08/07/2023	JOHN FRASER
	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

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 2766
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) 1881
a(2) Total number of active participants at the end of the plan year		6a(2) 1677
b Retired or separated participants receiving benefits		6b 0
c Other retired or separated participants entitled to future benefits.....		6c 579
d Subtotal. Add lines 6a(2) , 6b , and 6c		6d 2256
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.		6e 5
f Total. Add lines 6d and 6e		6f 2261
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item).....		6g 2224
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested.....		6h 465
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 2F 2G 2J 2K 2R 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 ASM RESEARCH LLC 401(K) PLAN	B Three-digit plan number (PN) ▶ 002
C Plan sponsor's name as shown on line 2a of Form 5500 ASM RESEARCH LLC	D Employer Identification Number (EIN) 54-1385056

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 PRINCIPAL 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
42-0127290	61271	613953	2261	01/01/2022	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 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
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(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 ▶ CUSTODIAL GUARANTEED INTEREST CONTRACT

b	Balance at the end of the previous year	7b	15663045
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c	Additions: (1) Contributions deposited during the year	7c(1)	794546	
	(2) Dividends and credits.....	7c(2)		
	(3) Interest credited during the year.....	7c(3)	259767	
	(4) Transferred from separate account.....	7c(4)		
	(5) Other (specify below)	7c(5)	9279665	

▶ LOAN PAYMENT, ROLLOVER, OUTSIDE INVESTMENT TRANSFER

(6) Total additions.....	7c(6)	10333978
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d	Total of balance and additions (add lines 7b and 7c(6))	7d	25997023
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e Deductions:

(1) Disbursed from fund to pay benefits or purchase annuities during year	7e(1)	1497692	
(2) Administration charge made by carrier.....	7e(2)	36585	
(3) Transferred to separate account.....	7e(3)		
(4) Other (specify below)	7e(4)	7002129	

▶ LOAN WITHDRAWAL, OUTSIDE INVESTMENT TRANSFER

(5) Total deductions.....	7e(5)	8536406
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f	Balance at the end of the current year (subtract line 7e(5) from line 7d)	7f	17460617
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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 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 ASM RESEARCH LLC 401(K) PLAN	B Three-digit plan number (PN) ▶	002
C Plan sponsor's name as shown on line 2a of Form 5500 ASM RESEARCH LLC	D Employer Identification Number (EIN) 54-1385056	

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 PRINCIPAL 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
42-0127290	61271	522191	2261	01/01/2022	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	

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(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	29346997

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 ▶

b Balance at the end of the previous year	7b	
c Additions: (1) Contributions deposited during the year	7c(1)	
(2) Dividends and credits.....	7c(2)	
(3) Interest credited during the year.....	7c(3)	
(4) Transferred from separate account.....	7c(4)	
(5) Other (specify below)	7c(5)	
▶		
(6) Total additions.....	7c(6)	
d Total of balance and additions (add lines 7b and 7c(6))	7d	
e Deductions:		
(1) Disbursed from fund to pay benefits or purchase annuities during year	7e(1)	
(2) Administration charge made by carrier.....	7e(2)	
(3) Transferred to separate account.....	7e(3)	
(4) Other (specify below)	7e(4)	
▶		
(5) Total deductions.....	7e(5)	
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 ASM RESEARCH LLC 401(K) PLAN	B Three-digit plan number (PN) ▶	002
C Plan sponsor's name as shown on line 2a of Form 5500 ASM RESEARCH LLC	D Employer Identification Number (EIN) 54-1385056	

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
PRINCIPAL LIFE INSURANCE COMPANY
42-0127290

(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

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)

PRINCIPAL LIFE INSURANCE COMPANY

42-0127290

(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?
13 37 50 64	CONTRACT ADMINISTRATOR	237806	Yes ☒ No ☐	Yes ☒ No ☐	0	Yes ☐ No ☒

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

LINCOLN FINANCIAL ADVISORS CORPORAT

35-1151034

(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 50	INVESTMENT ADVISORY	208190	Yes ☒ No ☐	Yes ☐ No ☒	48	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
(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.	
(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 D (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration	DFE/Participating Plan 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.
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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 ASM RESEARCH LLC 401(K) PLAN	B Three-digit plan number (PN) ►	002
C Plan or DFE sponsor's name as shown on line 2a of Form 5500 ASM RESEARCH LLC	D Employer Identification Number (EIN) 54-1385056	

Part I	Information on interests in MTIAs, CCTs, PSAs, and 103-12 IEs (to be completed by plans and DFEs) (Complete as many entries as needed to report all interests in DFEs)
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a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN MIDCAP GROWTH SEP ACCT-Z			
b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY			
c EIN-PN 42-0127290-021	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 1944513	
a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN CORE PLUS BOND SEP ACCT-Z			
b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY			
c EIN-PN 42-0127290-005	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 4393961	
a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN MIDCAP VALUE I SA-Z			
b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY			
c EIN-PN 42-0127290-043	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 1779409	
a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN SMCAP GROWTH I SEP ACCT-Z			
b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY			
c EIN-PN 42-0127290-070	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 892691	
a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN LARGE CAP GROWTH I SA-Z			
b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY			
c EIN-PN 42-0127290-066	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 5956357	
a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN REAL ESTATE SECS SA-Z			
b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY			
c EIN-PN 42-0127290-095	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 2027261	
a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN SMCAP VALUE II SEP ACCT-Z			
b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY			
c EIN-PN 42-0127290-096	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 2531923	

a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN HIGH INCOME SEP ACCT-Z

b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY

c EIN-PN 42-0127290-101	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 0
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a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN CAPITAL APPR SA-Z

b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY

c EIN-PN 42-0127290-119	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 4421097
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a Name of MTIA, CCT, PSA, or 103-12 IE: PRIN EQUITY INCOME SA-Z

b Name of sponsor of entity listed in (a): PRINCIPAL LIFE INSURANCE COMPANY

c EIN-PN 42-0127290-120	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 5399784
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
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Part II Information on Participating Plans (to be completed by DFEs)

(Complete as many entries as needed to report all participating plans)

a Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN

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>ASM RESEARCH LLC 401(K) PLAN</u>	B Three-digit plan number (PN) ►	<u>002</u>
C Plan sponsor's name as shown on line 2a of Form 5500 <u>ASM RESEARCH LLC</u>	D Employer Identification Number (EIN) <u>54-1385056</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)	3000029	2163093
(2) Participant contributions.....	1b(2)	218	
(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)	2360677	2846028
(9) Value of interest in common/collective trusts.....	1c(9)		
(10) Value of interest in pooled separate accounts	1c(10)	43675875	29346997
(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)	141339277	125274552
(14) Value of funds held in insurance company general account (unallocated contracts).....	1c(14)	15663045	17460617
(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	206039121	177091287

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	206039121	177091287
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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)	4203914	
(B) Participants	2a(1)(B)	13740979	
(C) Others (including rollovers)	2a(1)(C)	2877885	
(2) Noncash contributions	2a(2)		
(3) Total contributions. Add lines 2a(1)(A) , (B) , (C) , and line 2a(2)	2a(3)		20822778
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)	124291	
(F) Other	2b(1)(F)	259767	
(G) Total interest. Add lines 2b(1)(A) through (F)	2b(1)(G)		384058
(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)	2454294	
(D) Total dividends. Add lines 2b(2)(A) , (B) , and (C)	2b(2)(D)		2454294
(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)		-8320637
(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)		-29084008
c Other income	2c		12129
d Total income. Add all income amounts in column (b) and enter total	2d		-13731386
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	14765254	
(2) To insurance carriers for the provision of benefits	2e(2)		
(3) Other	2e(3)	829	
(4) Total benefit payments. Add lines 2e(1) through (3)	2e(4)		14766083
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions)	2g		4369
h Interest expense	2h		
i Administrative expenses: (1) Professional fees	2i(1)		
(2) Contract administrator fees	2i(2)	237806	
(3) Investment advisory and management fees	2i(3)	208190	
(4) Other	2i(4)		
(5) Total administrative expenses. Add lines 2i(1) through (4)	2i(5)		445996
j Total expenses. Add all expense amounts in column (b) and enter total	2j		15216448
Net Income and Reconciliation			
k Net income (loss). Subtract line 2j from line 2d	2k		-28947834
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: COHNREZNICK

(2) EIN: 21-1478099

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 ASM RESEARCH LLC 401(K) PLAN		B Three-digit plan number (PN) ► 002
C Plan sponsor's name as shown on line 2a of Form 5500 ASM RESEARCH LLC		D Employer Identification Number (EIN) 54-1385056
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): 42-0127290		
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

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 _____

ASM Research LLC 401(k) Plan

Financial Statements
(With Supplementary Information)
and Independent Auditor's Report

December 31, 2022

ASM Research LLC 401(k) Plan

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Independent Auditor's Report

To the Plan Administrator
ASM Research LLC 401(k) Plan

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

We have performed audits of the financial statements of ASM Research LLC 401(k) 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)"). 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 a certifications from a qualified institution 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 9 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 *Auditor's Responsibilities for the Audit of the Financial Statements* section:

- The amounts and disclosures in the accompanying financial statements, 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 accompanying financial statements related to assets held by and certified to by a qualified institution 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).

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.

Auditor's 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 auditor's 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 significant likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

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.

Other Matters

Supplemental Schedules Required by ERISA

The supplemental Schedule of Assets (Held at End of Year) (Schedule H, Line 4i) 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 audits 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 its 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 a qualified institution 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).



Bethesda, Maryland
July 28, 2023

ASM Research LLC 401(k) Plan

Statements of Net Assets Available for Benefits December 31, 2022 and 2021

	<u>2022</u>	<u>2021</u>
Assets		
Investments, at fair value	\$ 154,621,549	\$ 185,015,152
Investments, at contract value	<u>17,460,617</u>	<u>15,663,045</u>
Total investments	<u>172,082,166</u>	<u>200,678,197</u>
Receivables		
Employer contributions receivable	2,163,093	3,000,029
Notes receivable from participants	2,846,028	2,360,677
Participant contributions receivable	<u>-</u>	<u>218</u>
Total receivables	<u>5,009,121</u>	<u>5,360,924</u>
Net assets available for benefits	<u><u>\$ 177,091,287</u></u>	<u><u>\$ 206,039,121</u></u>

See Notes to Financial Statements.

ASM Research LLC 401(k) Plan

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

Additions	
Investment income (loss)	
Net depreciation in fair value of investments	\$ (37,144,878)
Interest and dividend income	<u>2,454,294</u>
Total investment income (loss)	<u>(34,690,584)</u>
Interest income on notes receivable from participants	<u>124,291</u>
Contributions	
Participant	13,740,979
Employer	4,203,914
Rollovers	<u>2,877,885</u>
Total contributions	<u>20,822,778</u>
Other income	<u>12,129</u>
Deductions	
Benefits paid to participants	14,770,452
Administrative expenses	<u>445,996</u>
Total deductions	<u>15,216,448</u>
Decrease in net assets	(28,947,834)
Net assets available for benefits	
Beginning	<u>206,039,121</u>
End	<u><u>\$ 177,091,287</u></u>

See Notes to Financial Statements.

ASM Research LLC 401(k) Plan

Notes to Financial Statements December 31, 2022

Note 1 - Description of plan

The following description of the ASM Research LLC 401(k) Plan (the "Plan") provides only general information. Participants should refer to the Plan agreement for a more complete description of the Plan's provisions.

General

The Plan is a defined contribution plan covering all full-time employees of ASM Research LLC (the "Company") excluding leased employees or consultants. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA"). The trustee is responsible for oversight of the Plan. Plan management determines the appropriateness of the Plan's investment offerings, monitors investment performance and reports to the Plan's trustee.

Contributions

Each year, participants may contribute up to 75% of pre-tax annual compensation, as defined in the Plan. Participants who have attained age 50 before the end of the Plan year are eligible to make catch-up contributions. Participants may designate all or a portion of their deferral contributions as Roth elective deferral contributions instead of pre-tax elective deferral contributions. Participants may also contribute amounts representing distributions from other qualified defined benefit or defined contribution plans (rollover). Participants direct the investment of their contributions into various investment options offered by the Plan. The Plan includes an auto-enrollment provision whereby all newly eligible employees are automatically enrolled in the Plan unless they affirmatively elect not to participate in the Plan. Automatically enrolled participants have their deferral rate set at 6% of eligible compensation and their contributions invested in a designated balanced fund until changed by the participant. The Plan was amended to add an automatic increase function 1% each year until the participant hits the maximum of 15%.

The Company matches 50% of participant deferrals up to 6% per pay period. As of January 1, 2018, the Company amended the Plan to add a "true-up" contribution. The Plan sponsor contributes an additional amount, as a "true-up", to the extent necessary to ensure that the aggregate amount of matching contributions for the year is equal to the lesser of (i) the sum of 3% of eligible compensation or (ii) a maximum amount of \$2,300. Total employer contributions for the year ended December 31, 2022, amount to \$2,040,821 including \$358,625 of Service Contract Act ("SCA") contributions, of which \$63,117 remains receivable. For the year ended December 31, 2022, the "true-up" contribution was \$13,180, of which all remains receivable.

The Company also makes a qualified non-elective contribution ("QNEC") in an amount necessary to meet the Company's requirement under an applicable prevailing wage statute. Additional discretionary contributions may also be contributed at the option of the Company. During the year ended December 31, 2022, the Company made a QNEC contribution of \$31,795 of which all remains receivable. During the year ended December 31, 2022, the Company made a \$2,055,000 discretionary profit-sharing contribution to the Plan all of which remains receivable. Participants also direct the investment of Company contributions. Contributions are subject to certain Internal Revenue Service ("IRS") limitations.

ASM Research LLC 401(k) Plan

Notes to Financial Statements December 31, 2022

Participant accounts

Each participant's account is credited with the participant's contributions and Company matching contributions, as well as allocations of the Company's discretionary profit-sharing contributions and Plan earnings. Participant accounts are charged with an allocation of administrative expenses that are paid by the Plan. Allocations are based on participant earnings, account balances, or specific participant transactions as defined. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

Vesting

Participants are immediately vested in their contributions plus actual earnings thereon. Vesting in the Company's matching and discretionary profit-sharing contribution portion of their accounts is based on years of continuous service. A participant is 100% vested after three years of credited service.

Notes receivable from participants

Participants may borrow from their fund accounts a minimum of \$1,000 up to a maximum equal to the lesser of \$50,000 or 50% of their account balance less any outstanding loan balance on the date the new loan is issued. The loans are secured by the balance in the participant's account. The loan interest rate, determined periodically, is set based on the rates available for similar loans from commercial lending. Principal and interest are paid ratably through semi-monthly payroll deductions.

Payment of benefits

On termination of service due to death, disability or retirement, a participant may elect to receive either a lump-sum amount equal to the value of the participant's vested interest in his or her account, a series of substantially equal payments over a fixed period, or a specified dollar amount each year. For termination for other reasons, a participant may receive the value of the vested interest in his or her account as a lump-sum distribution.

Forfeited accounts

At December 31, 2022 and 2021, forfeited non-vested accounts totaled \$13,130 and \$10,819, respectively. These accounts may be used to pay Plan administrative expenses or reduce future employer contributions. Also, in 2022, employer contributions were reduced by \$829,284 from forfeited non-vested accounts.

Note 2 - Summary of accounting policies

Basis of accounting

The accompanying financial statements are presented on the accrual basis of accounting.

Investment contracts held by a defined contribution plan are required to be reported at fair value, except for fully benefit-responsive investment contracts. Contract value is the relevant measure for that portion of the net assets available for benefits of a defined contribution plan attributable to fully benefit-responsive investment contracts because contract value is the amount participants normally would receive if they were to initiate permitted transactions under the terms of the Plan.

Use of estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, and disclosures of contingent assets and liabilities. Actual results could differ from these estimates.

ASM Research LLC 401(k) Plan

Notes to Financial Statements December 31, 2022

Investment valuation and income recognition

Investments are reported at fair value (except for fully benefit-responsive investment contracts, which are reported at contract value). 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. The Plan's management determines the Plan's valuation policies utilizing information provided by the investment advisers and trustee. See Note 3 for discussion of fair value measurements.

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

Notes receivable from participants

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

Payment of benefits

Benefits are recorded when paid.

Expenses

Certain expenses of maintaining the Plan are paid by the Plan, unless otherwise paid by the Company. Expenses that are paid by the Company are excluded from these financial statements. Fees related to the administration of notes receivable from participants are charged directly to the participant's account and are included in administrative expenses. Investment related expenses are included in net depreciation of fair value of investments.

Note 3 - Fair value measurements

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy under Financial Accounting Standards Board Accounting Standards Codification 820 are described as follows:

Level 1: Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Plan has the ability to access.

Level 2: Inputs to the valuation methodology include:

- quoted prices for similar assets or liabilities in active markets;
- quoted prices for identical or similar assets or liabilities in inactive markets;
- inputs other than quoted prices that are observable for the asset or liability; and
- inputs that are derived principally from or corroborated by observable market data by correlation or other means.

If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.

ASM Research LLC 401(k) Plan

Notes to Financial Statements December 31, 2022

Level 3: Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques maximize the use of relevant observable inputs and minimize the use of unobservable inputs.

Following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at December 31, 2022 and 2021:

Mutual funds: 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 and Exchange Commission. These funds are required to publish their daily net asset value ("NAV") and to transact at that price. The mutual funds held by the Plan are deemed to be actively traded.

Pooled separate accounts: Primarily valued at NAV per unit based on quoted market prices of the underlying investments. There are no unfunded commitments from participants in the Plan who invest in these accounts.

The following tables set forth by level, within the fair value hierarchy, the Plan's assets at fair value as of December 31, 2022 and 2021. Classification within the fair value hierarchy table is based on the lowest level of any input that is significant to the fair value measurement.

	December 31, 2022			
	Total	Level 1	Level 2	Level 3
Mutual funds	\$ 125,274,552	\$ 125,274,552	\$ -	\$ -
Total assets in the fair value hierarchy	125,274,552	\$ 125,274,552	\$ -	\$ -
Investments measured at NAV(a)	29,346,997			
Total investments at fair value	\$ 154,621,549			
	December 31, 2021			
	Total	Level 1	Level 2	Level 3
Mutual funds	\$ 141,339,277	\$ 141,339,277	\$ -	\$ -
Total assets in the fair value hierarchy	141,339,277	\$ 141,339,277	\$ -	\$ -
Investments measured at NAV(a)	43,675,875			
Total investments at fair value	\$ 185,015,152			

- (a) In accordance with Subtopic 820-10, certain investments that were measured at NAV per share (or its equivalent) have not been classified in the fair value hierarchy. The fair value amounts presented in these tables are intended to permit reconciliation of the fair value hierarchy to the line items presented in the statements of net assets available for benefits.

ASM Research LLC 401(k) Plan

Notes to Financial Statements December 31, 2022

For the years ended December 31, 2022 and 2021, there were no significant transfers between Levels 1 and 2. There are no Level 3 investments.

Fair value of investments in entities that use NAV

The following tables summarize investments for which fair value is measured using the NAV per share practical expedient as of December 31, 2022 and 2021. There are no participant redemption restrictions for these investments; the redemption notice period is applicable only to the Plan.

	2022			
	Fair value	Unfunded commitments	Redemption frequency (if currently eligible)	Redemption notice period
Pooled separate accounts	\$ 29,346,997	N/A	Daily	1 Day
Total investments measured at NAV	<u>\$ 29,346,997</u>			

	2021			
	Fair value	Unfunded commitments	Redemption frequency (if currently eligible)	Redemption notice period
Pooled separate accounts	\$ 43,675,875	N/A	Daily	1 Day
Total investments measured at NAV	<u>\$ 43,675,875</u>			

Note 4 - Fully benefit-responsive investment contract

The Plan holds a traditional investment contract. This contract meets the fully benefit-responsive investment contract criteria and, therefore, is reported at contract value. Contract value is the relevant measure for fully benefit-responsive investment contracts because this is the amount received by participants if they were to initiate permitted transactions under the terms of the Plan. Contract value represents contributions made under each contract, plus earnings, less participant withdrawals, and administrative expenses.

The traditional investment contract held by the Plan is a guaranteed investment contract. The contract issuer is contractually obligated to repay the principal and interest at a specified interest rate that is guaranteed to the Plan. The crediting rate is based on a formula established by the contract issuer but may not be less than 1% or greater than 3%. The crediting rate is reviewed on a quarterly basis for resetting. The contract cannot be terminated before the scheduled maturity date.

The Plan's ability to receive amounts due in accordance with fully benefit-responsive investment contracts is dependent on the third-party issuer's ability to meet its financial obligations. The issuer's ability to meet its contractual obligations may be affected by future economic and regulatory developments.

Certain events might limit the ability of the Plan to transact at contract value with the contract issuer. These events may be different under each contract. Examples of such events include the following:

1. The Plan's failure to qualify under Section 401(a) of the Internal Revenue Code (the "IRC") or the failure of the trust to be tax-exempt under Section 501(a) of the IRC.
2. Premature termination of the contracts.

ASM Research LLC 401(k) Plan

Notes to Financial Statements December 31, 2022

3. Plan termination or merger.
4. Changes to the Plan's prohibition on competing investment options.
5. Bankruptcy of the Plan sponsor or other Plan sponsor events (for example, divestitures or spinoffs of a subsidiary) that significantly affect the Plan's normal operations.

No events are probable of occurring that might limit the ability of the Plan to transact at contract value with the contract issuers and that also would limit the ability of the Plan to transact at contract value with the participants.

In addition, certain events allow the issuer to terminate the contracts with the Plan and settle at an amount different from contract value. Those events may be different under each contract. Examples of such events include the following:

1. An uncured violation of the Plan's investment guidelines.
2. A breach of material obligation under the contract.
3. A material misrepresentation.
4. A material amendment to the agreements without the consent of the issuer.

Note 5 - Related-party transactions and party-in-interest transactions

Certain Plan investments were invested in funds managed by Principal Trust Company, the trustee as defined by the Plan and, therefore, these transactions qualify as party-in-interest transactions.

The Plan made direct payments of \$237,806 to Principal Life Insurance Company, the third-party administrator, an affiliate of the trustee, which were not covered by revenue sharing. The Plan Sponsor pays directly any other fees related to the Plan's operations.

Note 6 - Plan termination

Although it has not expressed any intent to do so, the Plan sponsor has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to provisions of ERISA. In the event of Plan termination, participants will become 100% vested in their accounts.

Note 7 - Tax status

The volume submitter plan the Plan has adopted obtained its latest opinion letter on August 8, 2014, in which the IRS stated that the volume submitter plan, as then designed, was in compliance with the applicable requirements of the IRC. The Plan has not yet filed for an individual determination letter. Although the Plan has been amended since receiving the opinion letter on the volume submitter plan, the Plan Administrator believes that the Plan is designed and is currently being operated in compliance with the applicable requirements of the IRC and, therefore, believes that the Plan is qualified and the related trust is tax-exempt.

GAAP requires Plan management to evaluate tax positions taken by the Plan and recognize a tax liability if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress.

ASM Research LLC 401(k) Plan

Notes to Financial Statements December 31, 2022

Note 8 - Risks and uncertainties

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

Note 9 - Certified investments

The Plan Administrator has elected the method of compliance permitted by 29 CFR 2520.103-8 of the DOL's Rules and Regulations for Reporting and Disclosure under ERISA. Investments and notes receivable from participants held at December 31, 2022 and 2021, and investment income and interest income on notes receivable from participants for the year ended December 31, 2022, that are disclosed in the accompanying financial statements and supplemental schedule, were obtained or derived from information supplied to the Plan Administrator and certified as complete and accurate by Delaware Charter Guarantee and Trust Company d/b/a Principal Trust Company, the trustee of the Plan.

Note 10 - Subsequent events

Events that occur after the statement of net assets available for benefits date but before the financial statements were available to be issued must be evaluated for recognition or disclosure. The effects of subsequent events that provide evidence about conditions that existed at the statement of net assets available for benefits date are recognized in the accompanying financial statements. Subsequent events which provide evidence about conditions that existed after the statements of net assets available for benefits date require disclosure in the accompanying notes. Management evaluated the activity of the Plan through July 28, 2023 (the date the financial statements were available to be issued) and concluded that no subsequent events have occurred that would require recognition in the financial statements or disclosure is required in the notes to the financial statements.

Supplementary Information

ASM Research LLC 401(k) Plan
EIN: 54-1385056
Plan # 002

Supplementary Information

Schedule of Assets (Held at End of Year) (Schedule H, Line 4i)
December 31, 2022

(a)	(b) Identity of issuer, borrower, lessor or similar party	(c) Description	(e) Current value
	American Funds EuroPacific Growth R5 Fund	Mutual fund	\$ 4,598,683
	American Funds New World R6 Fund	Mutual fund	2,439,834
	Oppenheimer Invesco Global Y Fund	Mutual fund	2,990,731
	Amana Income Institutional Fund	Mutual fund	405,768
	Fidelity Freedom Index Income Ins Prem Fund	Mutual fund	231,929
	Fidelity Freedom Index 2005 Ins Prem Fund	Mutual fund	11,230
	Fidelity Freedom Index 2010 Ins Prem Fund	Mutual fund	297,548
	Fidelity Freedom Index 2015 Ins Prem Fund	Mutual fund	2,508,301
	Fidelity Freedom Index 2020 Ins Prem Fund	Mutual fund	6,450,403
	Fidelity Freedom Index 2025 Ins Prem Fund	Mutual fund	14,566,849
	Fidelity Freedom Index 2030 Ins Prem Fund	Mutual fund	12,306,220
	Fidelity Freedom Index 2035 Ins Prem Fund	Mutual fund	14,795,251
	Fidelity Freedom Index 2040 Ins Prem Fund	Mutual fund	8,698,543
	Fidelity Freedom Index 2045 Ins Prem Fund	Mutual fund	11,884,438
	Fidelity Freedom Index 2050 Ins Prem Fund	Mutual fund	8,369,006
	Fidelity Freedom Index 2055 Ins Prem Fund	Mutual fund	6,523,675
	Fidelity Freedom Index 2060 Ins Prem Fund	Mutual fund	2,356,739
	Fidelity Freedom Index 2065 Ins Prem Fund	Mutual fund	702,055
	Fidelity Mid CP Index Fund	Mutual fund	3,932,785
	Fidelity SM Cap Index Fund	Mutual fund	3,471,075
	Fidelity US Bond Index Fund	Mutual fund	1,780,667
	Fidelity 500 Index Fund	Mutual fund	13,784,796
	PGIM High Yield R6 Fund	Mutual fund	2,168,026
*	Principal Capital Appr SA-Z	Pooled separate account	4,421,097
*	Principal Core Plus Bond Sep Acct-Z	Pooled separate account	4,393,961
*	Principal Equity Income SA-Z	Pooled separate account	5,399,784
*	Principal LargeCap Growth I SA-Z	Pooled separate account	5,956,357
*	Principal MidCap Growth Sep Acct-Z	Pooled separate account	1,944,513
*	Principal MidCap Value I SA-Z	Pooled separate account	1,779,409
*	Principal Real Estate Secs SA-Z	Pooled separate account	2,027,261
*	Principal SmallCap Growth I Sep Acct-Z	Pooled separate account	892,692
*	Principal SmallCap Value II Sep Acct-Z	Pooled separate account	2,531,923
*	Principal Fixed Income Gauranteed Option	Guaranteed investment contract	17,460,617
*	Participant loans	Interest at 3.75% to 6.50%, maturing at various dates, secured by participant account balance	2,846,028
	Total		<u><u>\$ 174,928,194</u></u>

* Party-in-interest.
Note: Cost not required.

See Independent Auditor's Report.



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SCHEDULE H, line 4i - SCHEDULE OF ASSETS (HELD AT END OF YEAR)

ASM R LLC 401() P

EIN 54 1385056
 PLAN NUMBER 002
 PLAN YEAR 01/01/2022 TO 12/31/2022

(A)	(B) Identity of issuer, borrower, lessor or similar party.	(C) Description of investment including maturity date, rate of interest, collateral, par or maturity value.	(D) Cost	(E) Current Value
	American Funds Service Company	Registered Investment Company Am Fds EuroPacific Grth R5 Fd	\$ 0.00	\$ 4,598,683.45
	The American Funds	Registered Investment Company American Funds NewWorld R6	\$ 0.00	\$ 2,439,834.20
	Amana	Registered Investment Company AMANA INCOME INSTITUTIONAL FD	\$ 0.00	\$ 405,768.39
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx Inc Ins Prem	\$ 0.00	\$ 231,928.54
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2005 Ins Pre	\$ 0.00	\$ 11,230.22
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2010 Ins Pre	\$ 0.00	\$ 297,548.24
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2015 Ins Pre	\$ 0.00	\$ 2,508,300.79
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2020 Ins Pre	\$ 0.00	\$ 6,450,403.21
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2025 Ins Pre	\$ 0.00	\$ 14,566,848.92
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2030 Ins Pre	\$ 0.00	\$ 12,306,220.32
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2035 Ins Pre	\$ 0.00	\$ 14,795,250.53
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2040 Ins Pre	\$ 0.00	\$ 8,698,543.26
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2045 Ins Pre	\$ 0.00	\$ 11,884,438.14
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2050 Ins Pre	\$ 0.00	\$ 8,369,005.95
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2055 Ins Pre	\$ 0.00	\$ 6,523,674.78

SCHEDULE H, line 4i - SCHEDULE OF ASSETS (HELD AT END OF YEAR)

ASM R LLC 401() P

EIN 54 1385056

PLAN NUMBER 002

PLAN YEAR 01/01/2022 TO 12/31/2022

(A)	(B) Identity of issuer, borrower, lessor or similar party.	(C) Description of investment including maturity date, rate of interest, collateral, par or maturity value.	(D) Cost	(E) Current Value
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2060 Ins Pre	\$ 0.00	\$ 2,356,739.08
	Fidelity Investments	Registered Investment Company Fidelity Frdm Idx 2065 Ins Pre	\$ 0.00	\$ 702,055.05
	Fidelity Investments	Registered Investment Company Fidelity Mid Cp Index Fund	\$ 0.00	\$ 3,932,785.39
	Fidelity Investments	Registered Investment Company Fidelity Sm Cap Index Fund	\$ 0.00	\$ 3,471,074.69
	Fidelity Investments	Registered Investment Company Fidelity US Bond Index Fund	\$ 0.00	\$ 1,780,667.13
	Fidelity Investments	Registered Investment Company Fidelity 500 Index Fund	\$ 0.00	\$ 13,784,795.90
	Oppenheimer	Registered Investment Company Inv Global Y Fd	\$ 0.00	\$ 2,990,730.46
*	Principal Life Insurance Company	Pooled Separate Accounts Prin Capital Appr SA-Z	\$ 0.00	\$ 4,421,097.35
*	Principal Life Insurance Company	Pooled Separate Accounts Prin Core Plus Bond Sep Acct-Z	\$ 0.00	\$ 4,393,960.80
*	Principal Life Insurance Company	Pooled Separate Accounts Prin Equity Income SA-Z	\$ 0.00	\$ 5,399,784.34
*	Principal Life Insurance Company	Insurance Company General Prin Fixed Inc Guar Option	\$ 0.00	\$ 17,460,616.63
*	Principal Life Insurance Company	Pooled Separate Accounts Prin LargeCap Growth I SA-Z	\$ 0.00	\$ 5,956,357.29
*	Principal Life Insurance Company	Pooled Separate Accounts Prin MidCap Growth Sep Acct-Z	\$ 0.00	\$ 1,944,512.73
*	Principal Life Insurance Company	Pooled Separate Accounts Prin MidCap Value I SA-Z	\$ 0.00	\$ 1,779,408.57
*	Principal Life Insurance Company	Pooled Separate Accounts Prin Real Estate Secs SA-Z	\$ 0.00	\$ 2,027,260.89

SCHEDULE H, line 4i - SCHEDULE OF ASSETS (HELD AT END OF YEAR)

ASM R LLC 401() P
EIN 54 1385056
PLAN NUMBER 002
PLAN YEAR 01/01/2022 TO 12/31/2022

(A)	(B) Identity of issuer, borrower, lessor or similar party.	(C) Description of investment including maturity date, rate of interest, collateral, par or maturity value.	(D) Cost	(E) Current Value
*	Principal Life Insurance Company	Pooled Separate Accounts Prin SmCap Growth I Sep Acct-Z	\$ 0.00	\$ 892,691.46
*	Principal Life Insurance Company	Pooled Separate Accounts Prin SmCap Value II Sep Acct-Z	\$ 0.00	\$ 2,531,923.31
	PGIM Investments	Registered Investment Company PGIM HIGH YIELD R6 FUND	\$ 0.00	\$ 2,168,025.84
*	Participant Loans	Range of Interest Rates Rates Range From 4.25% To 8.50%	\$ 0.00	\$ 2,846,028.00

