Form 5500	Annual Return/Report of Employee Benefit Plan	OMB Nos. 1210-0110 1210-0089
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	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.**	**2017** **This Form is Open to Public Inspection**

Part I Annual Report Identification Information

For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017

A This return/report is for:
- [ ] a multiemployer plan
- [ ] a multiple-employer plan (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)
- [x] a single-employer plan
- [ ] a DFE (specify) ____

B This return/report is:
- [ ] the first return/report
- [ ] the final return/report
- [ ] an amended return/report
- [ ] a short plan year return/report (less than 12 months)

C If the plan is a collectively-bargained plan, check here. . . . . ▶ [ ]

D Check box if filing under:
- [x] Form 5558
- [ ] automatic extension
- [ ] the DFVC program
- [ ] special extension (enter description)

Part II Basic Plan Information—enter all requested information

1a Name of plan
ATI 401K SAVINGS PLAN

1b Three-digit plan number (PN) ▶ 022

1c Effective date of plan 01/01/1981

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)
ALLEGHENY TECHNOLOGIES INCORPORATED

1000 SIX PPG PLACE
PITTSBURGH, PA 15222-5479

2b Employer Identification Number (EIN) 25-1792394

2c Plan Sponsor's telephone number 412-394-2800

2d Business code (see instructions) 331110

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.	07/05/2018	TERRANCE BROWN
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE			
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor
SIGN HERE			
	Signature of DFE	Date	Enter name of individual signing as DFE

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

3a Plan administrator's name and address [X] 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**	6772
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)**	4116
a(2) Total number of active participants at the end of the plan year	**6a(2)**	4233
b Retired or separated participants receiving benefits	**6b**	52
c Other retired or separated participants entitled to future benefits	**6c**	2232
d Subtotal. Add lines **6a(2)**, **6b**, and **6c**	**6d**	6517
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	**6e**	52
f Total. Add lines **6d** and **6e**.	**6f**	6569
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	**6g**	6543
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested	**6h**	0
7 Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item)	**7**	

8a If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristics Codes in the instructions:

2E 2F 2G 2J 2K 2R 2S 2T 3H

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)

- **(1)** [ ] Insurance
- **(2)** [ ] Code section 412(e)(3) insurance contracts
- **(3)** [X] Trust
- **(4)** [ ] General assets of the sponsor

9b Plan benefit arrangement (check all that apply)

- **(1)** [ ] Insurance
- **(2)** [ ] Code section 412(e)(3) insurance contracts
- **(3)** [X] Trust
- **(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

- **(1)** [X] **R** (Retirement Plan Information)
- **(2)** [ ] **MB** (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary
- **(3)** [ ] **SB** (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary

b General Schedules

- **(1)** [X] **H** (Financial Information)
- **(2)** [ ] **I** (Financial Information – Small Plan)
- **(3)** [ ] 0 **A** (Insurance Information)
- **(4)** [X] **C** (Service Provider Information)
- **(5)** [X] **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 2017 Form M-1 annual report. If the plan was not required to file the 2017 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 C (Form 5500)	Service Provider Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service	This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA).	2017
Department of Labor Employee Benefits Security Administration	▶ **File as an attachment to Form 5500.**	**This Form is Open to Public Inspection.**
Pension Benefit Guaranty Corporation		

For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017

A Name of plan
ATI 401K SAVINGS PLAN

B Three-digit plan number (PN) ▶ 022

C Plan sponsor's name as shown on line 2a of Form 5500
ALLEGHENY TECHNOLOGIES INCORPORATED

D Employer Identification Number (EIN)
25-1792394

Part I Service Provider Information (see instructions)

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).. . . . . [X] 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

TD AMERITRADE, INC
P.O. BOX 2226
OMAHA, NE 68103

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

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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)

ALIGHT SOLUTIONS LLC

82-1061233

(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?
15 50	RECORDKEEPER	26250	Yes [X] No [ ]	Yes [X] No [ ]	0	Yes [ ] No [X]

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

MERCER HR SERVICES, LLC

INVESTORS WAY
NORWOOD, MA 02062-1584

(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?
15 21 25 37 38 49 50 59 60 62 64 65 99	RECORDKEEPER/TRUSTEE	25960	Yes [X] No [ ]	Yes [ ] No [X]	0	Yes [ ] No [X]

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

PERSHING LLC

13-2741729

(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?
59 61	BROKERAGE CLEARING AGNT	0	Yes [X] No [ ]	Yes [X] No [ ]	2785	Yes [X] No [ ]

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

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

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

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

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

(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
PERSHING LLC	15 61	2785

(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.
MULTIPLE MUTUAL FUND COMPANIES 13-2741729	SHAREHOLDER SERVICING FEES AND FINDER'S FEES

(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)	DFE/Participating Plan Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration	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.**	**2017** **This Form is Open to Public Inspection.**

For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017

A Name of plan
ATI 401K SAVINGS PLAN

B Three-digit plan number (PN) ▶ 022

C Plan or DFE sponsor's name as shown on line 2a of Form 5500
ALLEGHENY TECHNOLOGIES INCORPORATED

D Employer Identification Number (EIN)
25-1792394

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)

a Name of MTIA, CCT, PSA, or 103-12 IE: ALLEGHENY TECH INC MASTER TRUST

b Name of sponsor of entity listed in (a): ALLEGHENY TECHNOLOGIED INCORPORATED

c EIN-PN 25-1792394-060 | **d** Entity code M | **e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 694882333

a Name of MTIA, CCT, PSA, or 103-12 IE: ATI STOCK FUND MASTER TRUST

b Name of sponsor of entity listed in (a): ALLEGHENY TECHNOLOGIED INCORPORATED

c EIN-PN 25-1792394-065 | **d** Entity code M | **e** Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 51939892

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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

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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)	Financial Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	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.**	**2017** **This Form is Open to Public Inspection**

For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017

A Name of plan
ATI 401K SAVINGS PLAN

B Three-digit plan number (PN) ▶ 022

C Plan sponsor's name as shown on line 2a of Form 5500
ALLEGHENY TECHNOLOGIES INCORPORATED

D Employer Identification Number (EIN)
25-1792394

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)	936419	0
(2) Participant contributions	1b(2)	713216	0
(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)	18773845	20660339
(9) Value of interest in common/collective trusts	1c(9)		
(10) Value of interest in pooled separate accounts	1c(10)		
(11) Value of interest in master trust investment accounts	1c(11)	665655462	746822225
(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)	4422897	5172267
(14) Value of funds held in insurance company general account (unallocated contracts)	1c(14)		
(15) Other	1c(15)		

		(a) Beginning of Year	(b) End of Year
1d Employer-related investments:			
(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	690501839	772654831
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 through1j)	1k	0	0
Net Assets			
l Net assets (subtract line 1k from line 1f)	1l	690501839	772654831

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)	30152664	
(B) Participants	2a(1)(B)	25029516	
(C) Others (including rollovers)	2a(1)(C)	1401086	
(2) Noncash contributions	2a(2)		
(3) Total contributions. Add lines **2a(1)(A), (B), (C),** and line **2a(2)**	2a(3)		56583266
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)	922420	
(F) Other	2b(1)(F)		
(G) Total interest. Add lines **2b(1)(A)** through **(F)**	2b(1)(G)		922420
(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)		
(D) Total dividends. Add lines **2b(2)(A)**, **(B)**, and **(C)**	2b(2)(D)		0
(3) Rents	2b(3)		
(4) Net gain (loss) on sale of assets: **(A)** Aggregate proceeds	2b(4)(A)		
(B) Aggregate carrying amount (see instructions)	2b(4)(B)		
(C) Subtract line **2b(4)(B)** from line **2b(4)(A)** and enter result	2b(4)(C)		0
(5) Unrealized appreciation (depreciation) of assets: **(A)** Real estate	2b(5)(A)		
(B) Other	2b(5)(B)		
(C) Total unrealized appreciation of assets. Add lines **2b(5)(A)** and **(B)**	2b(5)(C)		0

		(a) Amount	(b) Total
(6) Net investment gain (loss) from common/collective trusts	2b(6)		
(7) Net investment gain (loss) from pooled separate accounts	2b(7)		
(8) Net investment gain (loss) from master trust investment accounts	2b(8)		115768343
(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)		878331
c Other income	2c		-35202
d Total income. Add all **income** amounts in column (b) and enter total	2d		174117158
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	92436155	
(2) To insurance carriers for the provision of benefits	2e(2)		
(3) Other	2e(3)		
(4) Total benefit payments. Add lines **2e(1)** through **(3)**	2e(4)		92436155
f Corrective distributions (see instructions)	2f		1352
g Certain deemed distributions of participant loans (see instructions)	2g		333878
h Interest expense	2h		
i Administrative expenses: (1) Professional fees	2i(1)	25960	
(2) Contract administrator fees	2i(2)		
(3) Investment advisory and management fees	2i(3)		
(4) Other	2i(4)	26250	
(5) Total administrative expenses. Add lines **2i(1)** through **(4)**	2i(5)		52210
j Total expenses. Add all **expense** amounts in column (b) and enter total	2j		92823595
Net Income and Reconciliation			
k Net income (loss). Subtract line **2j** from line **2d**	2k		81293563
l Transfers of assets:			
(1) To this plan	2l(1)		859429
(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) [X] Unqualified **(2)** [ ] Qualified **(3)** [ ] Disclaimer **(4)** [ ] Adverse

b Did the accountant perform a limited scope audit pursuant to 29 CFR 2520.103-8 and/or 103-12(d)? [ ] Yes [X] No

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

(1) Name: SCHNEIDER DOWNS & CO., INC **(2)** EIN: 25-1408703

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:

		Yes	No	Amount
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.)	4a		X	
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	

			Yes	No	Amount
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?	4e	X		25000000
f	Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?	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.)	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	X		

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 If the plan is a defined benefit plan, is it covered under the PBGC insurance program (See ERISA section 4021.)? ..... ☐ Yes ☐ No ☐ Not determined
If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year_____. (See instructions.)

SCHEDULE R (Form 5500)	Retirement Plan Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	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.**	**2017** **This Form is Open to Public Inspection.**

For calendar plan year 2017 or fiscal plan year beginning 01/01/2017 and ending 12/31/2017

A Name of plan
ATI 401K SAVINGS PLAN

B Three-digit plan number (PN) ▶ 022

C Plan sponsor's name as shown on line 2a of Form 5500
ALLEGHENY TECHNOLOGIES INCORPORATED

D Employer Identification Number (EIN)
25-1792394

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): 20-2020334 27-3169253

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**

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that contributed more than 5% of total contributions to the plan during the plan year (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 participants on whose behalf no contributions were made by an employer as an employer of the participant for:

a The current year	**14a**	
b The plan year immediately preceding the current plan year	**14b**	
c The second preceding plan year	**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):

AUDITED FINANCIAL STATEMENTS AND SUPPLEMENTAL SCHEDULE

ATI 401(k) Savings Plan
As of December 31, 2017 and 2016 and for the Year Ended December 31, 2017
With Report of Independent Registered Public Accounting Firm

ATI 401(K) SAVINGS PLAN

Audited Financial Statements and Supplemental Schedule
As of December 31, 2017 and 2016 and for the Year Ended December 31, 2017

Contents

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SCHNEIDER DOWNS

Big Thinking. Personal Focus.

INDEPENDENT AUDITORS' REPORT

Allegheny Technologies Incorporated
Pittsburgh, Pennsylvania

Report on the Financial Statements

We have audited the accompanying financial statements of the ATI 401(k) Savings Plan (the Plan), which comprise the statement of net assets available for benefits as of December 31, 2017 and 2016, and the related statement of changes in net assets available for benefits for the year ended December 31, 2017, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes 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.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2017 and 2016, and the changes in net assets available for benefits for the year ended December 31, 2017, in accordance with accounting principles generally accepted in the United States of America.

Schneider Downs & Co., Inc.
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PrimeGlobal
An Association of Independent Accounting Firms

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Report on Supplementary Information

Our audits were conducted for the purpose of forming an opinion on the financial statements as a whole. The supplemental schedule of assets (held at end of year) as of December 31, 2017 is presented for the purpose of additional analysis and is not a required part of the financial statements but is supplementary information required by the Department of Labor's (DOL) Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 (ERISA). Such information is the responsibility of the Plan's management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the 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 auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

Schneider Downs & Co. Inc.

Columbus, Ohio
June 8, 2018

ATI 401(K) SAVINGS PLAN

Statements of Net Assets Available for Benefits

	December 31	
	2017	**2016**
Investments at fair value:		
Interest in Allegheny Technologies Incorporated Master Trust	**$ 600,023,722**	$ 552,505,608
Interest in ATI Company Stock Fund Master Trust	**51,939,892**	—
Interest in registered investment companies	**5,172,267**	4,422,897
Total investments at fair value	**657,135,881**	556,928,505
Investments at contract value:		
Interest in Allegheny Technologies Incorporated Master Trust	**94,858,611**	113,149,854
Total investments at contract value	**94,858,611**	113,149,854
Notes receivable from participants	**20,660,339**	18,773,845
Employer contributions receivable	—	936,419
Employee contributions receivable	—	713,216
	20,660,339	20,423,480
Net assets available for benefits	**$ 772,654,831**	$ 690,501,839

See accompanying notes.

ATI 401(K) SAVINGS PLAN

Statement of Changes in Net Assets Available for Benefits

	Year Ended December 31, 2017
Contributions:	
Employee	$ 25,029,516
Employer	30,152,664
Rollovers	1,401,086
Total contributions	56,583,266
Interest income on notes receivable from participants	922,420
Investment income (loss):	
Net investment gain from Plan interest in Allegheny Technologies Incorporated Master Trust	99,508,520
Net investment gain from Plan interest in ATI Company Stock Fund Master Trust	16,259,823
Net gain from interest in registered investment companies	878,331
Other loss	(35,202)
Total investment income	116,611,472
	174,117,158
Benefits paid to participants	(92,771,385)
Fees	(52,210)
	(92,823,595)
Net increase in net assets available for benefits prior to transfers	81,293,563
Transfers into plan, net	859,429
Net increase in net assets available for benefits	82,152,992
Net assets available for benefits at beginning of year	690,501,839
Net assets available for benefits at end of year	$ 772,654,831

See accompanying notes.

ATI 401(K) SAVINGS PLAN

Notes to Financial Statements

December 31, 2017

Note 1. Description of the Plan

The ATI 401(k) Savings Plan (the Plan) is a defined contribution plan and is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA). The Plan's sponsor is Allegheny Technologies Incorporated (ATI, the Plan Sponsor, or the Company). The Plan includes all eligible, non-represented employees of ATI's U.S. operations. The following brief description of the Plan is provided for general information purposes only. Participants should refer to the summary plan description for more complete information regarding eligibility, vesting, contributions, and withdrawals.

Individual accounts are maintained for each participant, reflecting the participant's before-tax and after-tax contributions, rollover contributions, Company matching contributions, and account earnings. The Plan's income and any related administrative expenses are allocated to participant accounts based on the proportionate value of the participant's accounts to the total market value of all accounts.

Amounts up to 80% of a participant's compensation, as defined in the Plan agreement, can be contributed in any combination of after-tax and before-tax contributions for each period, subject to limitations imposed by the Code ($18,000 for calendar year 2017). Catch up contributions of $6,000 were available to participants 50 years or older in 2017. Participants are allowed to rollover existing qualified retirement funds into the Plan. The Plan allows participants to direct their contributions, and contributions made on their behalf, to any of the investment options offered by the Plan. Effective in January 2017, participants are restricted to a 10% contribution and investment limit in the ATI Stock Fund. Unless otherwise specified by the participant, contributions are made to the Qualified Default Investment Alternative, which is the Vanguard Target Retirement Fund that most closely matches the participants 65th birthday date.

Employees are 100% vested in their contributions and associated investment performance at all times. In addition, all employees in the Plan are immediately vested in all company contributions, including the company match and non-elective contribution. The non-elective contribution represents 6.5% of eligible earnings while the company match is made at a rate of 50% on up to 6% of the employee's eligible earnings deferral, excluding catch up contributions.

A participant may borrow the lesser of $50,000 or 50% of his or her account balance. Loans are repayable through payroll deductions over periods ranging up to 60 months for general purpose loans and up to 180 months for residential loans. The interest rate is determined at the issuance of the loans at a rate equivalent to prevailing interest rates charged by a professional lender and is fixed over the life of the note.

Participants, while employed, may withdraw all or a portion of their after-tax contributions and may also withdraw all or a portion of their before-tax contributions in the event of demonstrated financial hardship, as defined by the Plan. After age 59 $^{1}/_{2}$, a participant may withdraw the vested portion of their account.

Participants with account balances greater than $1,000 are not required to take a distribution upon termination. Participants making hardship withdrawals are not permitted to contribute to the Plan for 6 months after the date of the hardship withdrawal.

Payments of benefits are available by request upon termination due to retirement, disability, death, or other voluntary or involuntary termination of employment. Distributions can only be made in the form of a lump sum.

All expenses incurred in the administration of the Plan, including those charged by the Plan's trustees are paid by the Plan, except as paid for or reimbursed by the Company. Through June 30, 2017, Mercer Trust Company was the Plan's trustee. Effective July 1, 2017, the Plan's trustee for the Company stock fund is Benefit Trust Company and the Plan's trustee for all other Plan assets is AON Trust Company. In conjunction with this transition, there was a net transfer into the Plan from the The ATI Retirement Plan, another ATI sponsored plan, primarily to combine account balances for employees who maintained balances in both the Plan and the ATI Retirement Plan into one account balance in their currently enrolled plan.

Note 2. Significant Accounting Policies

Use of Estimates and Basis of Accounting

The preparation of financial statements in conformity with generally accepted accounting principles in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements, accompanying notes and supplemental schedule. Actual results could differ from those estimates. The financial statements are prepared under the accrual basis of accounting.

Investment Valuation

The investments in master trusts, representing the Plan's interest in the net assets of these master trusts, are stated at fair value, or, for fully benefit-responsive investment contracts, at contract value. Contract value is the relevant measurement attributable to fully benefit-responsive investment contracts, because contract value is the amount participants would receive if they were to initiate permitted transactions under the terms of the Plan. The contract value represents contributions plus earnings, less participant withdrawals and administrative expenses.

The assets of the master trusts, as well as income/losses, are allocated among the participating plans by assigning to each plan those transactions (primarily contributions, benefit payments, and plan-specific expenses) that can be specifically identified and by allocating among all plans, in proportion to the fair value of the assets assigned to each plan, income and expenses resulting from the collective investments of the assets of the master trusts.

Payment of Benefits

Benefits are recorded when paid.

Notes Receivable from Participants

Notes receivable from participants represent participant loans that are recorded at their unpaid principal balance plus any accrued but unpaid interest. Interest income on notes receivable from participants is recorded when it is earned. Related fees are recorded as administrative expenses and are expensed when they are incurred. No allowance for credit losses were recorded as of December 31, 2017 or 2016. If a participant ceases to make a note repayment and the plan administrator deems the note to be a distribution, the note receivable balance is reduced and a benefit payment is recorded.

Note 3. Investments

Certain assets of the Plan, along with the assets of other ATI sponsored plans, are part of the master trusts. The Plan also permits self-directed investments in registered investment companies that are maintained in accounts separate from the master trusts. Through June 30, 2017, certain assets of the Plan were commingled in the Allegheny Technologies Incorporated Master Trust with the assets of other ATI sponsored defined contribution plans for investment and administrative purposes. Effective July 1, 2017, assets invested in Company stock were moved to the ATI Company Stock Fund Master Trust in which assets of the Plan are commingled with the assets of another ATI sponsored defined contribution plan for investment and administrative purposes. All remaining assets of the Plan remained in the Allegheny Technologies Incorporated Master Trust.

The following table is a summary, at fair value, of the net assets of the master trusts by investment type as of December 31, 2017 and 2016:

	2017		2016	
	Master Trust Balances	Plan's Interest in Master Trust Balances	Master Trust Balances	Plan's Interest in Master Trust Balances
Allegheny Technologies Incorporated Master Trust:				
Common collective trusts	$ 543,337,806	$ 384,809,131	$ 489,368,944	$ 343,657,311
Registered investment companies	270,960,966	210,489,658	216,426,850	167,666,711
Corporate common stock	—	—	72,658,442	40,684,637
Other	7,528,354	4,724,933	713,945	496,949
Total investments at fair value	$ 821,827,126	$ 600,023,722	$ 779,168,181	$ 552,505,608
Plan's interest in master trust		73%		71%
ATI Company Stock Fund Master Trust:				
Corporate common stock	$ 91,616,341	$ 51,581,756	$ —	$ —
Other	$ 636,100	$ 358,136	$ —	$ —
Total investments at fair value	$ 92,252,441	$ 51,939,892	$ —	$ —
Plan's interest in master trust		56%		—%

The following table is a summary, at contract value, of the net assets of the Allegheny Technologies Incorporated Master Trust by investment type as of December 31, 2017 and 2016:

	2017		2016	
	Master Trust Balances	Plan's Interest in Master Trust Balances	Master Trust Balances	Plan's Interest in Master Trust Balances
Allegheny Technologies Incorporated Master Trust:				
Synthetic investment contracts	$ 152,041,371	$ 94,858,611	$ 150,219,352	$ 95,949,841
Guaranteed investment contracts	—	—	26,928,391	17,200,013
Total investments held at contract value	$ 152,041,371	$ 94,858,611	$ 177,147,743	$ 113,149,854

Investment income attributable to the master trusts for the year ended December 31, 2017 was as follows:

	Allegheny Technologies Incorporated Master Trust	ATI Company Stock Fund Master Trust
Net appreciation in fair value of investments	$ 131,669,350	$ 28,817,638
Investment income from investments at fair value	4,349,528	2,507
Investment income from investments at contract value	2,796,603	—
Expenses		
Administrative expenses and other, net	(1,211,589)	—
Total investment income	$ 137,603,892	$ 28,820,145

Administrative fees for the ATI Company Stock Fund Master Trust are paid by the Allegheny Technologies Incorporated Master Trust.

Investments accounted for at contract value are held by the BNY Mellon Stable Value Fund (the Fund), which may invest in a diversified portfolio of guaranteed investment contracts including synthetic investment contracts, separate account contracts, cash and cash equivalents, and other instruments that can be carried at book value. All of these assets allow participant-directed transactions to be made at contract value. The assets underlying the synthetic investment contracts may include U.S. Treasury bonds, agency bonds, corporate bonds, residential mortgage backed securities, asset-backed securities, commercial mortgage-backed securities, and common collective trusts. These assets are owned by the Plan. As of December 31, 2017, the Fund had a product allocation of 4% to cash, 26% to fixed maturity contracts and 70% to constant duration contracts.

Interest crediting rates on the contracts held in the Fund are determined at the time of purchase. Such crediting rates are reviewed and may be reset on a quarterly basis.

Typically, the investment contracts in the Fund do not have a stated final maturity, but contracts wrapping individual bonds may have a gradual tapering of duration unless new bonds are purchased within the investment contract. These contracts are referred to as "fixed maturity" contracts, while "constant duration" contracts invest in common collective trusts or actively managed accounts, managed against a stated benchmark or to a targeted duration.

Certain investment contracts in the Fund may provide for adjustment to contract value for withdrawals made prior to termination. If the Plan were deemed to be in violation of ERISA or lose its tax exempt status, among other events, the issuers of the fully benefit responsive investment contracts would have the ability to terminate the contracts and settle at an amount different from contract value.

Certain investments are subject to restrictions or limitations if the Plan Sponsor decides to entirely exit an investment. Investments in registered investment companies, common collective trusts and the Fund may require at least 30 days prior notice to completely withdraw from the investments. The targeted date fund investments held in common collective trusts currently do not require the prior approval of the investment manager if the Plan Sponsor decides to entirely exit these investments, but prior trade date notification is necessary to effect timely securities settlement or delivery of an investment's liquidation and transfer to another investment. The Plan had no unfunded commitments as of December 31, 2017 and 2016.

Note 4. Fair Value Measurement

In accordance with accounting standards, fair value is defined as 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 accounting standards establish a three-level hierarchy for fair value measurements based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date.

Determination of Fair Value

Fair value is based upon quoted market prices, where available. If listed prices or quotes are not available, fair value is based upon models that primarily use, as inputs, market-based or independently sourced market parameters, including yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. In addition to market information, models may also incorporate transaction details, such as maturity. Valuation adjustments, such as liquidity valuation adjustments, may be necessary when the Plan is unable to observe a recent market price for a financial instrument that trades in inactive (or less active) markets. Liquidity adjustments are not taken for positions classified within Level 1 (as defined below) of the fair value hierarchy.

The methods described below may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Plan believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. There have been no changes in the methodologies used at December 31, 2017 and 2016.

Valuation Hierarchy

The three levels of inputs to measure fair value are as follows:

Level 1 – Quoted prices in active markets for identical assets and liabilities.

Level 2 – Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.

Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

Valuation Methodologies

The valuation methodologies used for assets and liabilities measured at fair value, including their general classification based on the fair value hierarchy, include the following:

- Cash and cash equivalents – Where the net asset value (NAV) is a quoted price in a market that is active, it is classified within Level 1 of the valuation hierarchy. In certain cases, NAV is a quoted price in a market that is not active, or is based on quoted prices for similar assets and liabilities in active markets, and these investments are classified within Level 2 of the valuation hierarchy.
- Corporate common stocks – These investments are valued at the closing price reported on the major market on which the individual securities are traded. Common stock is classified within Level 1 of the valuation hierarchy.
- Common collective trust funds – These investments are investment vehicles valued using the NAV, as a practical expedient, provided by the administrator of the fund. The NAV is based on the value of the underlying assets owned by the fund, minus its liabilities, and then divided by the number of shares outstanding.
- Registered investment companies – These investments are public investment vehicles valued using the NAV provided by the administrator of the fund. The NAV is based on the value of the underlying assets owned by the fund, minus its liabilities, and then divided by the number of shares outstanding. Where the NAV is a quoted price in a market that is active, it is classified within Level 1 of the valuation hierarchy.

The following tables present the financial instruments of the master trusts at fair value by caption on the statement of net assets available for benefits and by category of the valuation hierarchy (as described above) as of December 31, 2017 and 2016. The master trusts had no assets classified within Level 2 or Level 3 of the valuation hierarchy. There were no reclassifications of assets between levels of the fair value hierarchy for the period presented.

Master trust assets measured at fair value on a recurring basis:

December 31, 2017	Level 1	NAV (a)	Total
Common collective trusts	$ —	$ 543,337,806	$ 543,337,806
Registered investment companies	270,960,966	—	270,960,966
Corporate common stock	91,616,341	—	91,616,341
Other	8,164,454	—	8,164,454
	$ 370,741,761	$ 543,337,806	$ 914,079,567

December 31, 2016	Level 1	NAV (a)	Total
Common collective trusts	$ —	$ 489,368,944	$ 489,368,944
Registered investment companies	216,426,850	—	216,426,850
Corporate common stock	72,658,442	—	72,658,442
Other	713,945	—	713,945
	$ 289,799,237	$ 489,368,944	$ 779,168,181

(a) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in Note 3 and to the statements of assets available for benefits.

In addition to the Plan's investments in the master trusts, the Plan holds $5,172,267 and $4,422,897 in self-directed accounts as of December 31, 2017 and 2016, respectively. These self-directed accounts are invested in registered investment companies and are categorized as Level 1 assets.

Note 5. Income Tax Status

The Plan obtained its latest determination letter dated January 25, 2016, in which the Internal Revenue Service stated the Plan, as then designed, was in compliance with the applicable requirements of the Internal Revenue Code. Therefore, no provision for income taxes has been included in the Plan's financial statements.

The Plan administrator has analyzed the tax positions taken by the Plan, and has concluded that as of December 31, 2017 and 2016, there are no uncertain positions taken or expected to be taken. The earliest tax year open to U.S. Federal examination is 2014.

Note 6. Plan Termination

Although they have not expressed any intent to do so, the employing companies have the right under the Plan to discontinue their contributions at any time and to terminate their respective participation in the Plan subject to the provisions of ERISA. However, no such action may deprive any participant or beneficiary under the Plan of any vested right.

Note 7. Risks and Uncertainties

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

Note 8. Party-In-Interest Transactions

At December 31, 2017 and 2016, the Plan held 1,806,448 and 2,133,183 shares, respectively, of common stock of ATI, the sponsoring employer, with a fair value of $51,581,756 and $40,684,637, respectively. The shares held by the Plan at December 31, 2017 and 2016 reflect the Plan's interest in the master trusts. During the year ended December 31, 2017, the Plan recorded an investment gain of $16,259,823 related to its investment in the common stock of ATI.

ATI 401(K) SAVINGS PLAN

EIN: 25-1792394 Plan: 022

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

December 31, 2017

Description		Current Value
Participant loans* (4.25% to 9.25%, with maturities through 2032)	$	20,660,339
Registered investment companies - Self-directed accounts		5,172,267

* Party-in-interest

ATI 401(K) SAVINGS PLAN

EIN: 25-1792394 Plan: 022

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

December 31, 2017

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Participant loans* (4.25% to 9.25%, with maturities through 2032)	$	20,660,339
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