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

2018

This Form is Open to Public Inspection

Part I Annual Report Identification Information

For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018

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
RENAISSANCE TECHNOLOGIES LLC 401(K) PLAN

1b Three-digit plan number (PN) ▶ 002

1c Effective date of plan 12/19/2011

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)
RENAISSANCE TECHNOLOGIES LLC

800 THIRD AVENUE
NEW YORK, NY 10022-1535

2b Employer Identification Number (EIN) 26-0385758

2c Plan Sponsor's telephone number 212-821-1535

2d Business code (see instructions) 523900

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

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

SIGN HERE	Filed with authorized/valid electronic signature.	10/14/2019	JAMES ROWEN
	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

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**	349
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)**	314
a(2) Total number of active participants at the end of the plan year	**6a(2)**	314
b Retired or separated participants receiving benefits	**6b**	0
c Other retired or separated participants entitled to future benefits	**6c**	45
d Subtotal. Add lines **6a(2)**, **6b**, and **6c**	**6d**	359
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	**6e**	0
f Total. Add lines **6d** and **6e**.	**6f**	359
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	**6g**	359
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 3D 2T

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)	[ ]		**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 2018 Form M-1 annual report. If the plan was not required to file the 2018 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)

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

2018

This Form is Open to Public Inspection.

For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018

A Name of plan
RENAISSANCE TECHNOLOGIES LLC 401(K) PLAN

B Three-digit plan number (PN) ▶ 002

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

D Employer Identification Number (EIN)
26-0385758

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

SUNAMERICA ASSET MANAGEMENT, LLC
185 HUDSON STREET
SUITE 3300
JERSEY CITY, NJ 07311

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

CALAMOS INVESTMENTS
2020 CALAMOS COURT
NAPERVILLE, IL 60563-2787

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

DIMENSIONAL FUND ADVISORS LP
6300 BEE CAVE ROAD
BUILDING ONE
AUSTIN, TX 78746

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

FIDELITY MANAGEMENT & RES COMPANY
100 SALEM STREET
SMITHFIELD, RI 02917

04-2033129

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

GAMCO INVESTORS, INC.

ONE CORPORATE CENTER
RYE, NY 10580-1422

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

HENNESSY FUNDS

7250 REDWOOD BLVD.
SUITE 200
NOVATO, CA 94945

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

INTREPID CAPITAL FUNDS

C/O U.S. BANCORP FUND SERVICES, LLC
P.O. BOX 701
MILWAUKEE, WI 53201-0701

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

IVY INVESTMENTS

6300 LAMAR AVENUE
P.O. BOX 29217
SHAWNEE MISSION, KS 66201-9217

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

JANUS CAPITAL MANAGEMENT LLC

151 DETROIT STREET
DENVER, CO 80206

75-3019302

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

KINETICS MUTUAL FUNDS, INC.

C/O U.S. BANCORP FUND SERVICES, LLC
P.O. BOX 701
MILWAUKEE, WI 53201-0701

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

SEGALL BRYANT & HAMILL

C/O ALPS FUND SERVICES, INC.
P.O. BOX 328
DENVER, CO 80201-0328

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

PACIFIC INVESTMENT MANAGEMENT CO

650 NEWPORT CENTER DRIVE
NEWPORT BEACH, CA 92660

33-0629048

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

PUTNAM INVESTMENT MANAGEMENT, LLC

ONE POST OFFICE SQUARE
BOSTON, MA 02109

04-3542621

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

AIM INVESTMENT FUNDS

11 GREENWAY PLAZA
SUITE 100
HOUSTON, TX 77046

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

T.ROWE PRICE GROUP, LLC

100 EAST PRATT STREET
BALTIMORE, MD 21202

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

THOMPSON IM FUNDS, INC.

C/O US BANCORP FUND SERVICES, LLC
615 EAST MICHIGAN STREET
MILWAUKEE, WI 53202

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

VANECK

666 THIRD AVENUE
NEW YORK, NY 10017

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

THE VANGUARD GROUP, INC

PO BOX 2900
VALLEY FORGE, PA 19482

23-1945930

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

WELLS FARGO FUNDS MANAGEMENT LLC

525 MARKET STREET
SAN FRANCISCO, CA 94105

94-3382001

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

VICTORY PORTFOLIOS

3435 STELZER ROAD
SUITE 1000
COLUMBUS, OH 43219

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

LT TRUST COMPANY

61-1607607

(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)

LT TRUST COMPANY

61-1607607

(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 15 25	RECORDKEEPER	5267	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 ☐

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
(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 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

2018

This Form is Open to Public Inspection

For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018

A Name of plan
RENAISSANCE TECHNOLOGIES LLC 401(K) PLAN

B Three-digit plan number (PN) ▶ 002

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

D Employer Identification Number (EIN)
26-0385758

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	6877243	14244011
b Receivables (less allowance for doubtful accounts):			
(1) Employer contributions	1b(1)		
(2) Participant contributions	1b(2)		
(3) Other	1b(3)		
c General investments:			
(1) Interest-bearing cash (include money market accounts & certificates of deposit)	1c(1)	10887848	12689151
(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)	125867325	165915646
(6) Real estate (other than employer real property)	1c(6)		
(7) Loans (other than to participants)	1c(7)		
(8) Participant loans	1c(8)	653622	732851
(9) Value of interest in common/collective trusts	1c(9)		
(10) Value of interest in pooled separate accounts	1c(10)		
(11) Value of interest in master trust investment accounts	1c(11)		
(12) Value of interest in 103-12 investment entities	1c(12)		
(13) Value of interest in registered investment companies (e.g., mutual funds)	1c(13)	39222584	44519571
(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	183508622	238101230
	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	183508622	238101230

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)	9981069	
	(B) Participants	2a(1)(B)	5405474	
	(C) Others (including rollovers)	2a(1)(C)	890798	
	(2) Noncash contributions	2a(2)		
	(3) Total contributions. Add lines **2a(1)(A), (B), (C),** and line **2a(2)**	2a(3)		16277341
b	**Earnings on investments:**			
	(1) Interest:			
	(A) Interest-bearing cash (including money market accounts and certificates of deposit)	2b(1)(A)	233261	
	(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)	33713	
	(F) Other	2b(1)(F)		
	(G) Total interest. Add lines **2b(1)(A)** through **(F)**	2b(1)(G)		266974
	(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)	2804678	
	(D) Total dividends. Add lines **2b(2)(A)**, **(B)**, and **(C)**	2b(2)(D)		2804678
	(3) Rents	2b(3)		
	(4) Net gain (loss) on sale of assets: **(A)** Aggregate proceeds	2b(4)(A)		
	(B) Aggregate carrying amount (see instructions)	2b(4)(B)		
	(C) Subtract line **2b(4)(B)** from line **2b(4)(A)** and enter result	2b(4)(C)		0
	(5) Unrealized appreciation (depreciation) of assets: **(A)** Real estate	2b(5)(A)		
	(B) Other	2b(5)(B)		
	(C) Total unrealized appreciation of assets. Add lines **2b(5)(A)** and **(B)**	2b(5)(C)		0

		(a) Amount	(b) Total
(6) Net investment gain (loss) from common/collective trusts	2b(6)		
(7) Net investment gain (loss) from pooled separate accounts	2b(7)		
(8) Net investment gain (loss) from master trust investment accounts	2b(8)		
(9) Net investment gain (loss) from 103-12 investment entities	2b(9)		
(10) Net investment gain (loss) from registered investment companies (e.g., mutual funds)	2b(10)		-5804947
c Other income	2c		45164319
d Total income. Add all **income** amounts in column (b) and enter total	2d		58708365
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	4110489	
(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)		4110489
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions)	2g		
h Interest expense	2h		
i Administrative expenses: **(1)** Professional fees	2i(1)	5268	
(2) Contract administrator fees	2i(2)		
(3) Investment advisory and management fees	2i(3)		
(4) Other	2i(4)		
(5) Total administrative expenses. Add lines **2i(1)** through **(4)**	2i(5)		5268
j Total expenses. Add all **expense** amounts in column (b) and enter total	2j		4115757
Net Income and Reconciliation			
k Net income (loss). Subtract line **2j** from line **2d**	2k		54592608
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) [ ] Unqualified **(2)** [ ] Qualified **(3)** [X] Disclaimer **(4)** [ ] Adverse

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

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

(1) Name: PRICEWATERHOUSECOOPERS LLP **(2)** EIN: 13-4008324

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		10000000
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			

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)

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

2018

This Form is Open to Public Inspection.

For calendar plan year 2018 or fiscal plan year beginning 01/01/2018 and ending 12/31/2018

A Name of plan
RENAISSANCE TECHNOLOGIES LLC 401(K) PLAN

B Three-digit plan number (PN) ▶ 002

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

D Employer Identification Number (EIN)
26-0385758

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): 75-3182674

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):

Renaissance Technologies LLC 401(k) Plan

Financial Statements
and Supplemental Schedule
As of December 31, 2018 and 2017
and for the Year Ended December 31, 2018

Renaissance Technologies LLC 401(k) Plan
Index
December 31, 2018 and 2017

Report of Independent Auditors 1

Financial Statements:

Statements of Net Assets Available for Benefits as of December 31, 2018 and 2017 3

Statement of Changes in Net Assets Available for Benefits for the Year Ended December 31, 2018 4

Notes to Financial Statements 5

Supplemental Schedule*:

Schedule H, Line 4(i) - Schedule of Assets (Held at End of Year) as of December 31, 2018 15

*Other schedules required by 29 CFR 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosures under ERISA have been omitted because they are not applicable.



Report of Independent Auditors

To the Administrator of Renaissance Technologies LLC 401(k) Plan

Report on the Financial Statements

We were engaged to audit the accompanying financial statements of Renaissance Technologies LLC 401(k) Plan (the "Plan"), which comprise the statements of net assets available for benefits as of December 31, 2018 and 2017, and the related statement of changes in net assets available for benefits for the year ended December 31, 2018, 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 the 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 the financial statements based on conducting the audit in accordance with auditing standards generally accepted in the United States of America. Because of the matter described in the Basis for Disclaimer of Opinion paragraph, however, we were not able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion.

Basis for Disclaimer of Opinion

As permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974, the plan administrator instructed us not to perform, and we did not perform, any auditing procedures with respect to the information summarized in Note 5, which was certified by LT Trust Company, the trustee of the Plan, except for comparing such information with the related information included in the financial statements. We have been informed by the plan administrator that the trustee holds the Plan's investment assets and executes investment transactions. The plan administrator has obtained a certification from the trustee as of December 31, 2018 and 2017 and for the year ended December 31, 2018, that the information provided to the plan administrator by the trustee is complete and accurate.

Disclaimer of Opinion

Because of the significance of the matter described in the Basis for Disclaimer of Opinion paragraph, we have not been able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion. Accordingly, we do not express an opinion on the financial statements.

Other Matter

The supplemental schedule of Schedule H, Line 4(i) – Schedule of Assets (Held at End of Year) as of December 31, 2018 is required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 and is presented for the purpose of additional analysis and is not a required part of the financial statements. Because of the significance of the matter described in the Basis for Disclaimer of Opinion paragraph, we do not express an opinion on this supplemental schedule.

Report on Form and Content in Compliance with DOL Rules and Regulations

The form and content of the information included in the financial statements and supplemental schedule, other than that derived from the information certified by the trustee, have been audited by us in accordance with auditing standards generally accepted in the United States of America and, in our opinion, are presented in compliance with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974.

PricewaterhouseCoopers LLP

New York, NY

August 22, 2019

Renaissance Technologies LLC 401(k) Plan
Statements of Net Assets Available for Benefits
December 31, 2018 and 2017

	2018	2017
Assets		
Investments, at fair value	**$ 223,124,368**	$ 175,977,757
Notes receivable from participants	**732,851**	653,622
Subscriptions paid in advance (Note 2)	**14,244,011**	6,877,243
Net Assets Available for Benefits	**$238,101,230**	$183,508,622

The accompanying notes are an integral part of these financial statements.

Renaissance Technologies LLC 401(k) Plan
Statement of Changes in Net Assets Available for Benefits
For the Year ended December 31, 2018

Additions to Net Assets Attributed to:	
Investment income:	
Net appreciation on investments	**$ 39,359,372**
Interest and dividend income	**3,037,939**
Total Investment Income	**42,397,311**
Interest income from notes receivable from participants	**33,713**
Contributions:	
Employer	**9,981,069**
Participant rollovers	**890,798**
Participants	**5,405,474**
Total Contributions	**16,277,341**
Total Additions	**58,708,365**
Deductions from Net Assets Attributed to:	
Benefits paid to participants and beneficiaries	**4,110,489**
Administrative expenses	**5,268**
Total Deductions	**4,115,757**
Net Increase	**54,592,608**
Net Assets Available for Benefits, Beginning of Year	**183,508,622**
Net Assets Available for Benefits, End of Year	**$238,101,230**

The accompanying notes are an integral part of these financial statements.

1. Plan Description

General

The Renaissance Technologies LLC 401(K) Plan (the "Plan") was established effective December 19, 2011, and was most recently amended effective September 1, 2014. Renaissance Technologies LLC (the "Company" or "Renaissance") sponsors the Plan for its eligible employees and for eligible employees of its wholly owned subsidiary, Renaissance Institutional Management LLC. The following description of the Plan provides general information only. Participants should refer to the Plan document for a complete description of the Plan's provisions.

The Plan is a defined contribution 401(k) plan and is administered by the 401(k) Administration Committee (the "Plan Administrator") appointed by the Company. The Plan Administrator is responsible for providing Plan participants with information about their rights and benefits under the Plan. The Plan is designed to provide eligible employees with tax advantaged savings for retirement and is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA"), as amended. Participants may direct their investment to one or more investment funds offered by the Plan. Certain of these funds are managed by Renaissance whereby Renaissance is the general partner, managing member, or investment manager (the "Renaissance Funds"). Eligibility to invest in the Renaissance Funds is subject to the governing documents of such funds and applicable federal and state securities and other laws. Subject to meeting the funds' investment eligibility requirements, investment in the Renaissance Funds is offered on a fee-free basis. The Plan's assets are held in trust by LT Trust Company (the "Trustee"). The Trustee does not have any discretion, discretionary control or authority with respect to any assets of the Plan, including the investment or dispositions thereof.

Contributions

Full-time employees are eligible to participate in the Plan as of their date of hire. Once an eligible employee makes or receives an eligible contribution to the Plan, he or she becomes a participant in the Plan ("Participant"). Participants may elect to make pre-tax contributions, also called elective deferral contributions, up to 100% of their eligible compensation as defined by the Plan on a pre-tax basis, subject to limits imposed by the Internal Revenue Code ("IRC"). The IRC limited the maximum amount an employee may contribute on a pre-tax basis in 2018 to $18,500 for Participants under 50 years of age and $24,500 for Participants 50 years of age and over.

The Plan allows elective deferral contributions to be made as Roth contributions which are made in the same manner as pre-tax elective deferral contributions except that Roth contributions are made to the Plan on an after-tax basis.

The Company will match eligible employee's contributions in an amount equal to 500% of the employee's contributions not to exceed 2% of the employee's annual compensation (10% total including the Company's match) subject to a maximum of $275,000 total compensation. All matching contributions are computed by the Plan Administrator based on eligible compensation contributed to the Plan each month. For purposes of matching contributions, compensation is determined over the calendar year ending with the Plan year.

The Company may, in its sole discretion, make a profit sharing contribution to the Plan on behalf of eligible Participants. A Participant is eligible to receive a profit sharing contribution if he or she is employed by the Company on the last day of the Plan year. Eligible employees who terminate employment with the Company due to death or disability are eligible to receive a profit sharing contribution regardless of whether he or she is employed on the last day of the Plan year. Profit sharing contributions are allocated pro rata based on compensation to eligible Participant accounts.

For the years ended December 31, 2018 and 2017, profit sharing contributions were $2,423,891 and $2,359,865, respectively.

The Plan may accept a rollover contribution made on behalf of an eligible employee subject to certain procedures defined in the Plan.

Vesting

Participants are immediately 100% vested in their elective deferral contributions, rollover contributions, Company match and Company profit sharing contributions, and the earnings thereon.

Participant Accounts

Each Participant's account is credited with the Participant's contributions, the Company contributions and earnings (losses) of each investment fund in which the Participant has invested. Earnings (losses) of each investment fund are allocated to Participant accounts pro rata based on the Participants' investment balances.

Notes Receivable from Participants

Participants may borrow against their account balances subject to the approval of the Plan Administrator. The maximum amount a Participant can borrow against his or her account is (1) $50,000 minus the difference between the highest outstanding balance of loans in the past 12 months and the outstanding balance of loans from the Plan on the date the loan is made, or (2) the greater of one half the present value of his or her vested account balance or a total balance up to $10,000. If a loan exceeds one-half of the present value of the Participant's account balance, the Participant must give additional security for the loan.

The minimum loan is $1,000, and each Participant can only have two loans outstanding at a time. Loans must be repaid in accordance with the repayment schedule over a period not extending beyond five years from the date of the loan, unless the loan is used for a principal residence. The loans are secured by the balance in the Participant's account and bear interest at rates commensurate with local prevailing rates as determined by the Plan Administrator. Loans outstanding during the years ended December 31, 2018 and 2017 charged interest between 3.25% and 5.75%. Principal and interest is paid ratably through monthly payroll deductions.

Investments

The Plan allows Participants to direct the investment of account balances in one or more available investment funds, which consist of a money market fund, mutual funds, and the Renaissance Funds, pursuant to the Plan Administrator's uniform guidelines and procedures relating to Participant self-direction.

Benefit Payments

The Plan permits lump-sum distributions to Participants upon retirement, termination, disability, or death in accordance with provisions of the Plan. Withdrawals from the Plan may also be made based upon circumstances of financial hardship.

Plan Expenses

Certain Plan expenses are charged to Participants including loan processing fees, and redemption and distribution fees. All other expenses of administering the Plan are paid by the Company.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying financial statements are prepared on the accrual basis of accounting in

accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and all values are stated in U.S. Dollars.

Valuation of investments

Shares or interests in money market and mutual funds are valued at the daily closing price, as reported by that fund to the Trustee. The Renaissance Funds, however, are valued only as of the last day of each calendar month by Renaissance. Investments in Renaissance Funds are valued at fair value. Renaissance is responsible for establishing the methods to determine fair value. Participant's accounts are credited with their allocable share of the earnings and losses of each investment fund since the immediately preceding valuation date. For purposes of the allocation of investment earnings and losses, the Plan Administrator may adjust the value of interests of funds in accounts as of the preceding valuation date to account for any contributions, distributions or withdrawals that occur after such preceding valuation date.

Investments in the Renaissance Funds are measured at fair value. The Company follows the practical expedient provisions per Financial Accounting Standards Board Accounting Standards Codification 820 ("FASB ASC 820"), which permits the Company to estimate the fair value of investments at net asset value if the net asset value is calculated in a manner consistent with the measurement principles of Financial Accounting Standards Board Accounting Standards Codification 946, Financial Services – Investment Companies ("FASB ASC 946"). The Company evaluates each investment to determine that its net asset value is calculated in a manner consistent with FASB ASC 946. In accordance with FASB ASC 946, the Company also considers whether an adjustment to the net asset value is necessary based upon various factors, including, but not limited to, the attributes of the interest in the investment held, including the rights and obligations, and any restrictions on or illiquidity of such interests, and the fair value of the Renaissance Funds' investment portfolio or other assets and liabilities. No adjustments were considered necessary.

Income Recognition

Investments in the Renaissance Funds are recorded on the effective date of the contribution to or redemption from the funds. Gains/(losses) on the Renaissance Funds are recorded pursuant to the governing documents of each fund and are communicated by the Company to the Trustee. Purchases of mutual funds and money market funds are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividend income is recorded on the ex-dividend date. Net appreciation on investments consists of gains and losses on investments bought and sold as well as held during the year.

Subscriptions paid in advance

Subscriptions paid in advance represent Plan assets that were contributed by Participants to the Renaissance Funds in advance of the Renaissance Funds' effective subscription date of January 1, 2019, as well as amounts transferred between Plan investments as of December 31, 2018.

Benefit Payments
Benefit payments are recorded when paid.

Notes Receivable
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.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make

estimates and assumptions that affect the fair value of investments, the reported amounts of other assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of income and expenses during the reporting period. Actual results may differ from those estimates.

3. Fair Value Measurements and Disclosures

ASC 820, *Fair Value Measurements and Disclosures,* defines fair value, establishes a framework for measuring fair value, and expands disclosures about assets and liabilities measured at fair value. The objective of a fair value measurement is to determine 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 (an exit price). Under ASC 820, fair value measurements are not adjusted for transaction costs.

The standard prioritizes, within a measurement of fair value, the use of market-based inputs over entity specific inputs and establishes a three-level valuation hierarchy for disclosure of fair value measurements based on the transparency of inputs to the valuation of an asset or liability. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 inputs); quoted prices in markets that are not considered to be active or assets and liabilities for which all significant inputs are observable, either directly or indirectly, for substantially the full term of the asset or liability (Level 2 inputs); and finally, unobservable inputs (Level 3 inputs). An asset or liability's categorization within the valuation hierarchy is based on the lowest level of input that is significant, individually or in the aggregate, to the fair value measurement.

As of December 31, 2018 and 2017, the Plan held $165,915,646 and $125,867,325, respectively, of interests in Renaissance Funds. Renaissance values these funds using the practical expedient and therefore these investments have not been categorized in the fair value hierarchy.

The following table presents assets carried at fair value as of December 31, 2018 and 2017, on the accompanying statements of net assets available for benefits and by the fair value hierarchy. The Plan held no Level 2 or Level 3 investments as of and for the years ended December 31, 2018 and December 31, 2017.

As of December 31, 2018 the Plan had no unfunded commitments.

December 31, 2018		
Assets	**Total**	**Fair Value Measurements at December 31, 2018 Using Quoted Prices in Active Markets for Identical Assets (Level 1)**
Money market funds	$12,689,151	$12,689,151
Mutual funds	44,519,571	44,519,571
Investments excluded from valuation hierarchy	165,915,646	N/A
Total investments, at fair value	$223,124,368	$57,208,722

December 31, 2017		
Assets	**Total**	**Fair Value Measurements at December 31, 2017 Using Quoted Prices in Active Markets for Identical Assets (Level 1)**
Money market funds	$10,887,848	$10,887,848
Mutual funds	39,222,584	39,222,584
Investments excluded from valuation hierarchy	125,867,325	N/A
Total investments, at fair value	$175,977,757	$50,110,432

4. Fund Investment Objectives

The following is a brief description of the investment objectives, strategies, and certain attributes of the Renaissance Funds held by the Plan, see Note 8:

Long/Short Equity Funds

The Plan holds Interests in two Long/Short Equity Funds whose strategies are as follows:

The investment objective of the first such fund is to achieve over the long term a risk-adjusted return that, on a gross basis, exceeds that of the S&P 500 Index (with dividends reinvested) (the "Index") with lower volatility than the Index and relatively low beta by investing in a widely diversified portfolio consisting almost exclusively of listed global (i.e., U.S. and non-U.S.) equity securities that are publicly traded on U.S. securities exchanges. Effective July 1, 2018, redemptions will be permitted quarterly, and requests must be received no later than two full calendar months in advance. Prior to July 1, 2018, redemptions were permitted as of the last day of each calendar quarter and required at least 45 days prior irrevocable written notice

The investment objective of the second such fund is to maximize long-term return while attempting to meet a standard deviation target selected by the Company, maintaining low long-term beta relative to capitalization-weighted equity market indices. This strategy invests in equity securities that are publicly traded on global securities exchanges. Effective July 1, 2018, redemptions will be permitted quarterly, and requests must be received no later than two full calendar months in advance. Prior to July 1, 2018, redemptions were permitted as of the last day of each calendar quarter and required at least 45 days prior irrevocable written notice.

Managed Equities and Futures Fund

The investment objective is to maximize long-term return while attempting to meet a standard deviation target selected by the Company with low correlation to the U.S. and global (i.e. U.S. and non-U.S.) equity markets and medium to low correlation to other asset classes. This strategy invests in a diversified portfolio consisting primarily of positions in equity securities and futures and forward contracts, as well as related instruments. Effective July 1, 2018, redemptions will be permitted quarterly, and requests must be received no later than two full calendar months in advance. Prior to July 1, 2018, redemptions were permitted as of the last day of each calendar quarter and required at least 45 days prior irrevocable written notice.

Multi-Strategy Fund

The investment objective is to achieve appreciation of assets with low volatility by investing in other private investment funds sponsored by the Company. Effective July 1, 2018, redemptions will be permitted quarterly, and requests must be received no later than two full calendar months in advance. Prior to July 1, 2018, redemptions were permitted as of the last day of each calendar

quarter and required at least 45 days prior irrevocable written notice.

Statistical Arbitrage Funds

The investment objective is to achieve appreciation of assets through speculative investment and trading in a variety of both securities-related and futures-related financial instruments. Redemptions may be made on the last day of each calendar quarter and require at least 10 days prior irrevocable written notice.

5. Information Certified by the Plan's Trustee

The Plan Administrator has elected the method of annual reporting compliance permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. Accordingly, the Trustee has certified that the following data included in the accompanying financial statements and supplemental schedule are complete and accurate.

December 31,	**2018**	2017
Investments in money market and mutual funds	**$ 57,208,722**	$ 50,110,432
Notes receivable from participants	**732,851**	653,622
	$57,941,573	$50,764,054

Year ended December 31, 2018	
Net depreciation on investments in money market and mutual funds	**$(5,804,947)**
Interest and dividend income	**3,037,939**
Interest income from notes receivable from participants	**33,713**
	$ (2,733,295)

The Plan's independent accountants did not perform auditing procedures with respect to this information, except for comparing such information to the related information included in the financial statements, notes to financial statements and supplemental schedule.

6. Income Tax Status

The Company adopted the prototype 401(k) and profit sharing plan provided by LT Trust Company that received a favorable opinion letter from the Internal Revenue Service ("IRS") on March 31, 2014. The Plan Administrator believes that the Plan is currently designed and is being operated in compliance with the applicable requirements of the IRC.

U.S. GAAP requires Plan management to evaluate tax positions taken by the Plan and recognize a tax liability (or asset) if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. The Plan administrator has analyzed the tax positions taken by the Plan and has concluded that, as of December 31, 2018, there are no uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the financial statements. The Plan is subject to routine audits by taxing jurisdictions with respect to tax years for which the applicable statute of limitations has not expired; however, there are currently no audits for any tax period in progress.

7. Risks and Uncertainties

The Plan's mutual fund and money market fund investment options are exposed to various risks, such as interest rate, market and credit. Due to the level of risk associated with certain investments and

the level of uncertainty related to changes in the value of investments, it is at least reasonably possible that changes in the values of investment securities will occur in the near term, and such changes could have a material adverse effect on Participants' account balances and the amounts reported in the statements of net assets available for benefits.

The Plan's investments in the Renaissance Funds are exposed to various types of financial risks that are associated with the financial instruments and markets in which they invest.

In the normal course of business, many of the Renaissance Funds trade various financial instruments that carry off-balance-sheet, market, and credit risks. Generally, these financial instruments represent future commitments or options to purchase or sell other financial instruments at specific prices at specified future dates, which expose the Renaissance Funds to market risk if the market value of the contract is higher or lower than the contract price at the maturity date. In addition, non-exchange-traded derivative instruments expose the Renaissance Funds to credit risk arising from the potential inability of counterparties to perform under the terms of the contracts.

Some of the Renaissance Funds' over-the-counter ("OTC") derivative contracts contain credit-risk-related contingent features, primarily those included in certain International Swaps and Derivatives Association master agreements. These contingent features may result in the termination of derivative contracts if any of those Renaissance Funds' creditworthiness deteriorates. At December 31, 2018 and 2017, none of the Renaissance Funds were in violation of any covenants applicable to them.

Investments in derivative instruments subject the Renaissance Funds to off-balance-sheet market risk whereby changes in the fair value of the financial instruments underlying the derivative instruments may vary from the amount reflected on the financial statements of the Renaissance Funds.

Many of the Renaissance Funds invest in marketable and fixed-income securities and are exposed to market risks resulting from changes in the fair value of their investments. In addition, many of the Renaissance Funds are subject to credit risk and risks resulting from interest rate fluctuations on their investments.

Securities sold, but not yet purchased by the Renaissance Funds may give rise to off-balance-sheet risk. These transactions involve an obligation to purchase such securities at a future date at the market value. A gain, limited to the price at which a Renaissance Fund sold the securities short, or a loss, potentially unlimited in amount, will be recognized. The Renaissance Funds have recorded these obligations in the financial statements at fair values of the securities as of December 31, 2018 and 2017. There is an element of off-balance-sheet risk in that, if the securities increase in value, it will be necessary to purchase the securities at a cost in excess of the price reflected on the financial statements of the Renaissance Funds.

Regulatory agencies may restrict certain trading activities through new regulations. In some instances, the Renaissance Funds' compliance with these new regulations may have an impact on their trading strategy or operational efficiency. The Renaissance Funds continually assess the impact of compliance with all new regulatory requirements to determine the appropriate risk management and operational processes to implement.

The Renaissance Funds' portfolios may consist of investments that require consideration of certain risks typically not associated with investing in U.S. issuers. Such risks include, among other things, related economic policies, unfavorable currency exchange rate fluctuations, imposition of exchange control regulation by the U.S. or non-U.S. governments, greater market volatility, differing securities market structures, and economic or political instability in foreign nations.

Some of the Renaissance Funds are exposed to the risk that the exchange rate of the U.S. dollar relative to other currencies may change in a manner that has an adverse effect on the reported value

of the Renaissance Funds' assets and liabilities denominated in currencies other than the U.S. dollar.

8. Related Parties

The Plan offered Participants the opportunity to direct their investment into the following funds for which Renaissance serves as the general partner, managing member, or investment manager:

- Medallion Fund RF L.P.
- Medallion RMPRF Fund, L.P.
- Renaissance Institutional Equities Fund LLC (Series RF)
- Renaissance Kaleidoscope RF Fund LLC
- Renaissance Institutional Diversified Alpha Fund LLC (Series RF)
- Renaissance Institutional Diversified Global Equities Onshore Fund L.P. (Series RF)

There were no amounts due to or from the Renaissance Funds as of December 31, 2018 and 2017. Transactions between the Renaissance Funds and the Plan for the year ended December 31, 2018 were as follows:

Fund	Strategy (Note 4)	January 1, 2018 Balance	Contributions	Net gains on investments	Redemptions	December 31, 2018 balance
Medallion Fund RF L.P.	Statistical Arbitrage Fund	$75,584,176	$6,730,741	$37,370,306	$(27,042,463)	$92,642,760
Medallion RMPRF Fund, L.P.	Statistical Arbitrage Fund	$4,393,165	$2,158,563	$2,620,793	$(2,276,460)	$6,896,061
Renaissance Institutional Equities Fund LLC (Series RF)	Long/Short Equity Fund	$32,545,103	$13,537,695	$3,535,383	$(3,368,629)	$46,249,552
Renaissance Kaleidoscope RF Fund LLC	Multi-Strategy Fund	$2,108,666	$411,392	$467,456	$(556,440)	$2,431,074
Renaissance Institutional Diversified Alpha Fund LLC (Series RF)	Managed Equities and Futures Fund	$6,943,484	$1,183,347	$332,591	$(693,015)	$7,766,407
Renaissance Institutional Diversified Global Equities Onshore Fund L.P. (Series RF)	Long/Short Equity Fund	$4,292,731	$5,245,841	$837,790	$(446,570)	$9,929,792
Total		$125,867,325	$29,267,579	$45,164,319	$(34,383,577)	$165,915,646

9. Plan Termination

Although it has not expressed any intent to do so, the Company has the right to terminate the Plan subject to the provisions of ERISA. In the event of Plan termination, the net assets of the Plan will be distributed to Participants in accordance with the provisions of the Plan and as prescribed by ERISA.

10. Subsequent Events

The Company evaluated all events that occurred from January 1, 2019 through August 22, 2019, the date the financial statements were available to be issued. During this period, the Plan did not have any material recognizable subsequent events.

Supplemental Schedule

Renaissance Technologies LLC 401(k) Plan

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

December 31, 2018

(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
	Money Market Funds:			
	Gabelli U.S. Treasury Money Market Fund	Money market fund, 11,845,388 shares		**$11,845,388**
	AWP Money Market Fund	Money market fund, 843,763 shares		**843,763**
	Total Money Market Funds			**12,689,151**
	Mutual Funds:			
	Calamos International Growth FD Class - A	Mutual fund, 36,458 shares		**541,042**
	DFA Inflation Protected Sec Portfolio	Mutual fund, 68,659 shares		**778,588**
	Fidelity Advisor Industrials - I	Mutual fund, 17,741 shares		**593,602**
	Fidelity Select Consumer Staples	Mutual fund, 12,591 shares		**866,646**
	Henessy Gas Utility Index Fund (2299)	Mutual fund, 25,797 shares		**656,282**
	Intrepid Capital SM Cap Fund	Mutual fund, 58,804 shares		**783,860**
	Ivy High Income Fund Class Y	Mutual fund, 180,508 shares		**1,241,895**
	Janus Henderson Triton Fund T Shares	Mutual fund, 48,977 shares		**1,230,794**
	Kinetics Market Opportunities	Mutual fund, 63,074 shares		**1,397,715**
	Oppenheimer Developing Markets - Y	Mutual fund, 22,526 shares		**846,734**
	PIMCO Global Bond - Admin	Mutual fund, 63,372 shares		**557,043**
	PIMCO Real Estate Real Return Strategy	Mutual fund, 129,332 shares		**1,008,789**
	Segall Bryant & Hamill Trust Fundamental Inte Strategy	Mutual fund, 19,148 shares		**242,604**
	Sunamerica Focused Dividend Strategy A	Mutual fund, 45,333 shares		**700,388**
	T Rowe Price Global Tech FD	Mutual fund, 268,636 shares		**3,277,365**
	T Rowe Price Health Sciences FD	Mutual fund, 47,289 shares		**3,168,811**
	Thompson Plumb Bond Fund	Mutual fund, 82,711 shares		**930,498**
	U.S. Government Inc Trust Cl Y	Mutual fund, 27,878 shares		**335,929**
	Van Eck International Investors Gold – A	Mutual fund, 110,425 shares		**844,753**
	Vanguard 500 Index Fund - Admiral	Mutual fund, 29,278 shares		**6,776,114**
	Vanguard Dividend Growth FD	Mutual fund, 162,109 shares		**3,965,182**
	Vanguard Energy Fund – Inv	Mutual fund, 20,600 shares		**891,378**
	Vanguard Target Retirement Income	Mutual fund, 4,821 shares		**61,469**
	Vanguard Target Retirement 2015	Mutual fund, 7,193 shares		**99,700**
	Vanguard Target Retirement 2020	Mutual fund, 20,240 shares		**579,481**

* - Related party as defined by U.S. GAAP

** - The cost of participant-directed investments is not required to be disclosed.

The above information related to money market and mutual funds, as well as notes receivable from participants, has been derived from data certified accurate and complete by LT Trust Company, the trustee.

Renaissance Technologies LLC 401(k) Plan

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

December 31, 2018

(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
	Mutual Funds (Continued):			
	Vanguard Target Retirement 2025	Mutual fund, 63,731 shares		**$ 1,084,064**
	Vanguard Target Retirement 2030	Mutual fund, 25,245 shares		**778,040**
	Vanguard Target Retirement 2035	Mutual fund, 127,929 shares		**2,407,623**
	Vanguard Target Retirement 2040	Mutual fund, 38,074 shares		**1,230,179**
	Vanguard Target Retirement 2045	Mutual fund, 146,800 shares		**2,966,828**
	Vanguard Wellesley Income Inv	Mutual fund, 63,043 shares		**1,540,146**
	Victory Global Natural Resources Fund - Y	Mutual fund, 14,857 shares		**198,789**
	Wells Fargo Advantage Growth	Mutual fund, 55,556 shares		**1,937,240**
	Total Mutual Funds			**44,519,571**
	Alternative Investments:			
*	Renaissance Institutional Diversified Alpha Fund LLC - Series RF	Alternative investment. There is no maturity date, rate of interest, collateral, par or maturity value.		**7,766,407**
*	Renaissance Institutional Equities Fund LLC – Series RF	Alternative investment. There is no maturity date, rate of interest, collateral, par or maturity value.		**46,249,552**
*	Medallion Fund RF L.P.	Alternative investment. There is no maturity date, rate of interest, collateral, par or maturity value.		**92,642,760**
*	Renaissance Kaleidoscope RF Fund LLC	Alternative investment. There is no maturity date, rate of interest, collateral, par or maturity value.		**2,431,074**
*	Renaissance Institutional Diversified Global Equities Onshore Fund L.P. - Series RF	Alternative investment. There is no maturity date, rate of interest, collateral, par or maturity value.		**9,929,792**
*	Medallion RMPRF Fund, L.P.	Alternative investment. There is no maturity date, rate of interest, collateral, par or maturity value.		**6,896,061**
	Total Alternative Investments			**165,915,646**
*	**Notes receivable from participants**	Interest rate of 3.25%-5.75%, maturing 02/28/2019-08/14/2043.		**732,851**
	Total Assets Held			**$223,857,219**

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Renaissance Technologies LLC 401(k) Plan

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