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| <b>Form 5500-SF</b><br><br>Department of the Treasury<br>Internal Revenue Service<br><br>Department of Labor<br>Employee Benefits Security Administration<br>Pension Benefit Guaranty Corporation | <b>Short Form Annual Return/Report of Small Employee Benefit Plan</b><br><br>This form is required to be filed 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).<br><br><b>► Complete all entries in accordance with the instructions to the Form 5500-SF.</b> | OMB Nos. 1210-0110<br>1210-0089<br><br><b>2018</b><br><br><b>This Form is Open to Public Inspection</b> |
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|                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Part I Annual Report Identification Information</b>                                                                                                         |                                                                                                                                                                                                                                                                                                                                                               |
| For calendar plan year 2018 or fiscal plan year beginning <span style="color: blue;">01/01/2018</span> and ending <span style="color: blue;">12/31/2018</span> |                                                                                                                                                                                                                                                                                                                                                               |
| <b>A</b> This return/report is for:                                                                                                                            | <input checked="" type="checkbox"/> a single-employer plan <input type="checkbox"/> a multiple-employer plan (not multiemployer) (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)<br><br><input type="checkbox"/> a one-participant plan <input type="checkbox"/> a foreign plan |
| <b>B</b> This return/report is                                                                                                                                 | <input type="checkbox"/> the first return/report <input type="checkbox"/> the final return/report<br><input type="checkbox"/> an amended return/report <input type="checkbox"/> a short plan year return/report (less than 12 months)                                                                                                                         |
| <b>C</b> Check box if filing under:                                                                                                                            | <input type="checkbox"/> Form 5558 <input type="checkbox"/> automatic extension <input type="checkbox"/> DFVC program<br><input type="checkbox"/> special extension (enter description)                                                                                                                                                                       |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------|--|
| <b>Part II Basic Plan Information</b> —enter all requested information                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>1a</b> Name of plan<br><span style="color: blue;">MARSHALL WACE NORTH AMERICA LP 401(K) PROFIT SHARING &amp; TRUST</span>                                                                                                                                                                                                                                                                                                                                                                        | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>1b</b> Three-digit plan number (PN) ►</td> <td style="width:40%; text-align: center; color: blue;">001</td> </tr> <tr> <td colspan="2"><b>1c</b> Effective date of plan<br/><span style="color: blue;">01/01/2004</span></td> </tr> </table>                                                                                                                                          | <b>1b</b> Three-digit plan number (PN) ►                                                    | 001 | <b>1c</b> Effective date of plan<br><span style="color: blue;">01/01/2004</span>       |  |                                                                                        |  |
| <b>1b</b> Three-digit plan number (PN) ►                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>1c</b> Effective date of plan<br><span style="color: blue;">01/01/2004</span>                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>2a</b> Plan sponsor's name (employer, if for a single-employer plan)<br>Mailing address (include room, apt., suite no. and street, or P.O. Box)<br>City or town, state or province, country, and ZIP or foreign postal code (if foreign, see instructions)<br><span style="color: blue;">MARSHALL WACE NORTH AMERICA, LP</span><br><br><span style="color: blue;">350 PARK AVENUE</span><br><span style="color: blue;">18TH FLOOR</span><br><span style="color: blue;">NEW YORK, NY 10022</span> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>2b</b> Employer Identification Number (EIN) <span style="color: blue;">47-0943020</span></td> <td style="width:40%;"></td> </tr> <tr> <td><b>2c</b> Sponsor's telephone number<br/><span style="color: blue;">212-235-2891</span></td> <td></td> </tr> <tr> <td><b>2d</b> Business code (see instructions)<br/><span style="color: blue;">523900</span></td> <td></td> </tr> </table> | <b>2b</b> Employer Identification Number (EIN) <span style="color: blue;">47-0943020</span> |     | <b>2c</b> Sponsor's telephone number<br><span style="color: blue;">212-235-2891</span> |  | <b>2d</b> Business code (see instructions)<br><span style="color: blue;">523900</span> |  |
| <b>2b</b> Employer Identification Number (EIN) <span style="color: blue;">47-0943020</span>                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>2c</b> Sponsor's telephone number<br><span style="color: blue;">212-235-2891</span>                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>2d</b> Business code (see instructions)<br><span style="color: blue;">523900</span>                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>3a</b> Plan administrator's name and address <input checked="" type="checkbox"/> Same as Plan Sponsor.                                                                                                                                                                                                                                                                                                                                                                                           | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>3b</b> Administrator's EIN</td> <td style="width:40%;"></td> </tr> <tr> <td><b>3c</b> Administrator's telephone number</td> <td></td> </tr> </table>                                                                                                                                                                                                                                  | <b>3b</b> Administrator's EIN                                                               |     | <b>3c</b> Administrator's telephone number                                             |  |                                                                                        |  |
| <b>3b</b> Administrator's EIN                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>3c</b> Administrator's telephone number                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>4</b> 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.<br><b>a</b> Sponsor's name<br><b>c</b> Plan Name                                                                                                                                                                                                              | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>4b</b> EIN</td> <td style="width:40%;"></td> </tr> <tr> <td><b>4d</b> PN</td> <td></td> </tr> </table>                                                                                                                                                                                                                                                                                | <b>4b</b> EIN                                                                               |     | <b>4d</b> PN                                                                           |  |                                                                                        |  |
| <b>4b</b> EIN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>4d</b> PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>5a</b> Total number of participants at the beginning of the plan year .....                                                                                                                                                                                                                                                                                                                                                                                                                      | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>5a</b></td> <td style="width:40%; text-align: center; color: blue;">79</td> </tr> </table>                                                                                                                                                                                                                                                                                            | <b>5a</b>                                                                                   | 79  |                                                                                        |  |                                                                                        |  |
| <b>5a</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 79                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>b</b> Total number of participants at the end of the plan year .....                                                                                                                                                                                                                                                                                                                                                                                                                             | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>5b</b></td> <td style="width:40%; text-align: center; color: blue;">93</td> </tr> </table>                                                                                                                                                                                                                                                                                            | <b>5b</b>                                                                                   | 93  |                                                                                        |  |                                                                                        |  |
| <b>5b</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>c</b> Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item) .....                                                                                                                                                                                                                                                                                                                                                     | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>5c</b></td> <td style="width:40%; text-align: center; color: blue;">90</td> </tr> </table>                                                                                                                                                                                                                                                                                            | <b>5c</b>                                                                                   | 90  |                                                                                        |  |                                                                                        |  |
| <b>5c</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>d(1)</b> Total number of active participants at the beginning of the plan year .....                                                                                                                                                                                                                                                                                                                                                                                                             | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>5d(1)</b></td> <td style="width:40%; text-align: center; color: blue;">49</td> </tr> </table>                                                                                                                                                                                                                                                                                         | <b>5d(1)</b>                                                                                | 49  |                                                                                        |  |                                                                                        |  |
| <b>5d(1)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 49                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>d(2)</b> Total number of active participants at the end of the plan year .....                                                                                                                                                                                                                                                                                                                                                                                                                   | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>5d(2)</b></td> <td style="width:40%; text-align: center; color: blue;">62</td> </tr> </table>                                                                                                                                                                                                                                                                                         | <b>5d(2)</b>                                                                                | 62  |                                                                                        |  |                                                                                        |  |
| <b>5d(2)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 62                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                             |     |                                                                                        |  |                                                                                        |  |
| <b>e</b> Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested .....                                                                                                                                                                                                                                                                                                                                                          | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"><b>5e</b></td> <td style="width:40%; text-align: center; color: blue;">0</td> </tr> </table>                                                                                                                                                                                                                                                                                             | <b>5e</b>                                                                                   | 0   |                                                                                        |  |                                                                                        |  |
| <b>5e</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                             |     |                                                                                        |  |                                                                                        |  |

**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, if applicable, a Schedule SB or Schedule MB completed and signed by an enrolled actuary, 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.

|                  |                                                   |            |                                                              |
|------------------|---------------------------------------------------|------------|--------------------------------------------------------------|
| <b>SIGN HERE</b> | Filed with authorized/valid electronic signature. | 04/29/2019 | ANTHONY CHEN                                                 |
|                  | Signature of plan administrator                   | Date       | Enter name of individual signing as plan administrator       |
| <b>SIGN HERE</b> | Filed with authorized/valid electronic signature. | 04/29/2019 | ANTHONY CHEN                                                 |
|                  | Signature of employer/plan sponsor                | Date       | Enter name of individual signing as employer or plan sponsor |

- 6a** Were all of the plan's assets during the plan year invested in eligible assets? (See instructions.)..... ☒ Yes ☐ No
- b** Are you claiming a waiver of the annual examination and report of an independent qualified public accountant (IQPA) under 29 CFR 2520.104-46? (See instructions on waiver eligibility and conditions.)..... ☒ Yes ☐ No
- If you answered "No" to either line 6a or line 6b, the plan cannot use Form 5500-SF and must instead use Form 5500.**
- c** 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.)

**Part III Financial Information**

| <b>7</b> Plan Assets and Liabilities                                                                 |              | <b>(a) Beginning of Year</b> | <b>(b) End of Year</b> |
|------------------------------------------------------------------------------------------------------|--------------|------------------------------|------------------------|
| <b>a</b> Total plan assets .....                                                                     | <b>7a</b>    | 12267197                     | 12967409               |
| <b>b</b> Total plan liabilities .....                                                                | <b>7b</b>    | 0                            |                        |
| <b>c</b> Net plan assets (subtract line 7b from line 7a) .....                                       | <b>7c</b>    | 12267197                     | 12967409               |
| <b>8</b> Income, Expenses, and Transfers for this Plan Year                                          |              | <b>(a) Amount</b>            | <b>(b) Total</b>       |
| <b>a</b> Contributions received or receivable from:                                                  |              |                              |                        |
| <b>(1)</b> Employers .....                                                                           | <b>8a(1)</b> | 1010672                      |                        |
| <b>(2)</b> Participants .....                                                                        | <b>8a(2)</b> | 1034061                      |                        |
| <b>(3)</b> Others (including rollovers) .....                                                        | <b>8a(3)</b> | 456263                       |                        |
| <b>b</b> Other income (loss) .....                                                                   | <b>8b</b>    | -1090467                     |                        |
| <b>c</b> Total income (add lines 8a(1), 8a(2), 8a(3), and 8b) .....                                  | <b>8c</b>    |                              | 1410529                |
| <b>d</b> Benefits paid (including direct rollovers and insurance premiums to provide benefits) ..... | <b>8d</b>    | 709477                       |                        |
| <b>e</b> Certain deemed and/or corrective distributions (see instructions) ....                      | <b>8e</b>    | 0                            |                        |
| <b>f</b> Administrative service providers (salaries, fees, commissions) .....                        | <b>8f</b>    | 840                          |                        |
| <b>g</b> Other expenses .....                                                                        | <b>8g</b>    |                              |                        |
| <b>h</b> Total expenses (add lines 8d, 8e, 8f, and 8g) .....                                         | <b>8h</b>    |                              | 710317                 |
| <b>i</b> Net income (loss) (subtract line 8h from line 8c) .....                                     | <b>8i</b>    |                              | 700212                 |
| <b>j</b> Transfers to (from) the plan (see instructions) .....                                       | <b>8j</b>    |                              |                        |

**Part IV Plan Characteristics**

- 9a** If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristic Codes in the instructions:  
2A 2S 2E 3D 2G 2J 2K 2F 2T 3F
- b** If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristic Codes in the instructions:

**Part V Compliance Questions**

| <b>10</b> During the plan year:                                                                                                                                                                                                           |            | <b>Yes</b> | <b>No</b> | <b>Amount</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----------|---------------|
| <b>a</b> Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? (See instructions and DOL's Voluntary Fiduciary Correction Program) .....                       | <b>10a</b> |            | X         |               |
| <b>b</b> Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 10a.) .....                                                                                                      | <b>10b</b> |            | X         |               |
| <b>c</b> Was the plan covered by a fidelity bond? .....                                                                                                                                                                                   | <b>10c</b> | X          |           | 500000        |
| <b>d</b> Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty? .....                                                                                                   | <b>10d</b> |            | X         |               |
| <b>e</b> Were any fees or commissions paid to any brokers, agents, or other persons by an insurance carrier, insurance service, or other organization that provides some or all of the benefits under the plan? (See instructions.) ..... | <b>10e</b> |            | X         |               |
| <b>f</b> Has the plan failed to provide any benefit when due under the plan? .....                                                                                                                                                        | <b>10f</b> |            | X         |               |
| <b>g</b> Did the plan have any participant loans? (If "Yes," enter amount as of year-end.) .....                                                                                                                                          | <b>10g</b> | X          |           | 1341          |
| <b>h</b> If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.) .....                                                                                                              | <b>10h</b> | X          |           |               |
| <b>i</b> If 10h was answered "Yes," check the box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3 .....                                                       | <b>10i</b> | X          |           |               |

**Part VI Pension Funding Compliance**

**11** Is this a defined benefit plan subject to minimum funding requirements? (If "Yes," see instructions and complete Schedule SB (Form 5500) and line 11a below) ☐ Yes ☒ No

**11a** Enter the unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40..... **11a**

**12** Is this a defined contribution plan subject to the minimum funding requirements of section 412 of the Code or section 302 of ERISA? ☐ Yes ☒ No  
(If "Yes," complete line 12a or lines 12b, 12c, 12d, and 12e below, as applicable.)

**a** 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 letter ruling granting the waiver. .... Month ..... Day ..... Year .....

**If you completed line 12a, complete lines 3, 9, and 10 of Schedule MB (Form 5500), and skip to line 13.**

**b** Enter the minimum required contribution for this plan year ..... **12b**

**c** Enter the amount contributed by the employer to the plan for this plan year ..... **12c**

**d** Subtract the amount in line 12c from the amount in line 12b. Enter the result (enter a minus sign to the left of a negative amount) ..... **12d**

**e** Will the minimum funding amount reported on line 12d be met by the funding deadline? ☐ Yes ☐ No ☐ N/A

**Part VII Plan Terminations and Transfers of Assets**

**13a** Has a resolution to terminate the plan been adopted in any plan year? ☐ Yes ☒ No

If "Yes," enter the amount of any plan assets that reverted to the employer this year ..... **13a**

**b** Were all the plan assets distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC? ☐ Yes ☒ No

**c** 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.)

**13c(1)** Name of plan(s):

**13c(2)** EIN(s)

**13c(3)** PN(s)