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

|         |                                                                                                                                                                                                                                                                                                                                                   |    |                                                    |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------------------------------------------------|
| Part II | Basic Plan Information—enter all requested information                                                                                                                                                                                                                                                                                            |    |                                                    |
| 1a      | Name of plan<br>MARSHALL WACE NORTH AMERICA LP 401(K) PROFIT SHARING & TRUST                                                                                                                                                                                                                                                                      | 1b | Three-digit plan number (PN) ▶ 001                 |
|         |                                                                                                                                                                                                                                                                                                                                                   | 1c | Effective date of plan<br>01/01/2004               |
| 2a      | 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>MARSHALL WACE NORTH AMERICA, LP<br><br>350 PARK AVENUE<br>18TH FLOOR<br>NEW YORK, NY 10022 | 2b | Employer Identification Number (EIN)<br>47-0943020 |
|         |                                                                                                                                                                                                                                                                                                                                                   | 2c | Plan Sponsor's telephone number<br>212-235-2891    |
|         |                                                                                                                                                                                                                                                                                                                                                   | 2d | Business code (see instructions)<br>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. | 09/28/2023 | ANTHONY CHEN                                                 |
|           | 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                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3a</b> Plan administrator's name and address <input checked="" type="checkbox"/> Same as Plan Sponsor                                                                                                                                                                                                                                                                                                                   |  | <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                                                                                                                                     |  | <b>4b</b> EIN<br><br><b>4d</b> PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>5</b> Total number of participants at the beginning of the plan year                                                                                                                                                                                                                                                                                                                                                    |  | <b>5</b> 140                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>6</b> Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines <b>6a(1)</b> , <b>6a(2)</b> , <b>6b</b> , <b>6c</b> , and <b>6d</b> ).                                                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>a(1)</b> Total number of active participants at the beginning of the plan year .....                                                                                                                                                                                                                                                                                                                                    |  | <b>6a(1)</b> 98                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>a(2)</b> Total number of active participants at the end of the plan year .....                                                                                                                                                                                                                                                                                                                                          |  | <b>6a(2)</b> 113                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>b</b> Retired or separated participants receiving benefits .....                                                                                                                                                                                                                                                                                                                                                        |  | <b>6b</b> 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>c</b> Other retired or separated participants entitled to future benefits.....                                                                                                                                                                                                                                                                                                                                          |  | <b>6c</b> 51                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>d</b> Subtotal. Add lines <b>6a(2)</b> , <b>6b</b> , and <b>6c</b> .....                                                                                                                                                                                                                                                                                                                                                |  | <b>6d</b> 164                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>e</b> Deceased participants whose beneficiaries are receiving or are entitled to receive benefits. ....                                                                                                                                                                                                                                                                                                                 |  | <b>6e</b> 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>f</b> Total. Add lines <b>6d</b> and <b>6e</b> .....                                                                                                                                                                                                                                                                                                                                                                    |  | <b>6f</b> 164                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>g</b> Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item).....                                                                                                                                                                                                                                                                             |  | <b>6g</b> 160                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>h</b> Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested.....                                                                                                                                                                                                                                                                                  |  | <b>6h</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>7</b> Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item) .....                                                                                                                                                                                                                                                                                       |  | <b>7</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>8a</b> If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristics Codes in the instructions:<br>2A 2S 2E 3D 2G 2J 2K 2F 2T                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>b</b> If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristics Codes in the instructions:                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>9a</b> Plan funding arrangement (check all that apply)<br>(1) <input type="checkbox"/> Insurance<br>(2) <input type="checkbox"/> Code section 412(e)(3) insurance contracts<br>(3) <input checked="" type="checkbox"/> Trust<br>(4) <input type="checkbox"/> General assets of the sponsor                                                                                                                              |  | <b>9b</b> Plan benefit arrangement (check all that apply)<br>(1) <input type="checkbox"/> Insurance<br>(2) <input type="checkbox"/> Code section 412(e)(3) insurance contracts<br>(3) <input checked="" type="checkbox"/> Trust<br>(4) <input type="checkbox"/> General assets of the sponsor                                                                                                                                                                                                     |
| <b>10</b> Check all applicable boxes in 10a and 10b to indicate which schedules are attached, and, where indicated, enter the number attached. (See instructions)                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>a Pension Schedules</b><br>(1) <input checked="" type="checkbox"/> <b>R</b> (Retirement Plan Information)<br><br>(2) <input type="checkbox"/> <b>MB</b> (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary<br><br>(3) <input type="checkbox"/> <b>SB</b> (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary |  | <b>b General Schedules</b><br>(1) <input checked="" type="checkbox"/> <b>H</b> (Financial Information)<br>(2) <input type="checkbox"/> <b>I</b> (Financial Information – Small Plan)<br>(3) <input type="checkbox"/> <b>A</b> (Insurance Information)<br>(4) <input checked="" type="checkbox"/> <b>C</b> (Service Provider Information)<br>(5) <input type="checkbox"/> <b>D</b> (DFE/Participating Plan Information)<br>(6) <input type="checkbox"/> <b>G</b> (Financial Transaction Schedules) |

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

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

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

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

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

Receipt Confirmation Code \_\_\_\_\_

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

|                                                                                            |                                                      |     |
|--------------------------------------------------------------------------------------------|------------------------------------------------------|-----|
| For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022 |                                                      |     |
| A Name of plan<br>MARSHALL WACE NORTH AMERICA LP 401(K) PROFIT SHARING & TRUST             | B Three-digit plan number (PN) ▶                     | 001 |
|                                                                                            |                                                      |     |
| C Plan sponsor's name as shown on line 2a of Form 5500<br>MARSHALL WACE NORTH AMERICA, LP  | D Employer Identification Number (EIN)<br>47-0943020 |     |

|        |                                                 |
|--------|-------------------------------------------------|
| 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)..... ☒ 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 |
| THE VANGUARD GROUP, INC.                                                                                   |
| 23-1945930                                                                                                 |

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

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

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

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

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

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

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

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

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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)

THE VANGUARD GROUP, INC.

23-1945930

| (b)<br>Service Code(s) | (c)<br>Relationship to employer, employee organization, or person known to be a party-in-interest | (d)<br>Enter direct compensation paid by the plan. If none, enter -0-. | (e)<br>Did service provider receive indirect compensation? (sources other than plan or plan sponsor) | (f)<br>Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures? | (g)<br>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)<br>Did the service provider give you a formula instead of an amount or estimated amount? |
|------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| 99 37 50<br>15 52 68   | NONE                                                                                              | 720                                                                    | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                            | 0                                                                                                                                                                               | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                          |

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

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

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

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

**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<br>(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<br>(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<br>(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)

|                    |                     |
|--------------------|---------------------|
| <b>a</b> Name:     | <b>b</b> EIN:       |
| <b>c</b> Position: |                     |
| <b>d</b> Address:  | <b>e</b> Telephone: |
|                    |                     |

Explanation:

|                    |                     |
|--------------------|---------------------|
| <b>a</b> Name:     | <b>b</b> EIN:       |
| <b>c</b> Position: |                     |
| <b>d</b> Address:  | <b>e</b> Telephone: |
|                    |                     |

Explanation:

|                    |                     |
|--------------------|---------------------|
| <b>a</b> Name:     | <b>b</b> EIN:       |
| <b>c</b> Position: |                     |
| <b>d</b> Address:  | <b>e</b> Telephone: |
|                    |                     |

Explanation:

|                    |                     |
|--------------------|---------------------|
| <b>a</b> Name:     | <b>b</b> EIN:       |
| <b>c</b> Position: |                     |
| <b>d</b> Address:  | <b>e</b> Telephone: |
|                    |                     |

Explanation:

|                    |                     |
|--------------------|---------------------|
| <b>a</b> Name:     | <b>b</b> EIN:       |
| <b>c</b> Position: |                     |
| <b>d</b> Address:  | <b>e</b> Telephone: |
|                    |                     |

Explanation:

|                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                              |                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>SCHEDULE H</b><br><b>(Form 5500)</b><br><br><small>Department of the Treasury<br/>Internal Revenue Service</small><br><br><small>Department of Labor<br/>Employee Benefits Security Administration</small><br><br><small>Pension Benefit Guaranty Corporation</small> | <b>Financial Information</b><br><br>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).<br><br><b>► File as an attachment to Form 5500.</b> | OMB No. 1210-0110<br><br><b>2022</b><br><br><b>This Form is Open to Public Inspection</b> |
| For calendar plan year 2022 or fiscal plan year beginning <u>01/01/2022</u> and ending <u>12/31/2022</u>                                                                                                                                                                 |                                                                                                                                                                                                                                                                              |                                                                                           |
| <b>A</b> Name of plan<br><u>MARSHALL WACE NORTH AMERICA LP 401(K) PROFIT SHARING &amp; TRUST</u>                                                                                                                                                                         | <b>B</b> Three-digit plan number (PN) <span style="float: right;">►</span>                                                                                                                                                                                                   | <u>001</u>                                                                                |
| <b>C</b> Plan sponsor's name as shown on line 2a of Form 5500<br><u>MARSHALL WACE NORTH AMERICA, LP</u>                                                                                                                                                                  | <b>D</b> Employer Identification Number (EIN)<br><u>47-0943020</u>                                                                                                                                                                                                           |                                                                                           |

| Part I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Asset and Liability Statement |                       |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------|-----------------|
| <b>1</b> 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. <b>Round off amounts to the nearest dollar.</b> 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 |
| <b>a</b> Total noninterest-bearing cash.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>1a</b>                     |                       |                 |
| <b>b</b> Receivables (less allowance for doubtful accounts):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |                       |                 |
| <b>(1)</b> Employer contributions.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>1b(1)</b>                  |                       |                 |
| <b>(2)</b> Participant contributions.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>1b(2)</b>                  |                       |                 |
| <b>(3)</b> Other.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>1b(3)</b>                  |                       |                 |
| <b>c</b> General investments:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                       |                 |
| <b>(1)</b> Interest-bearing cash (include money market accounts & certificates of deposit).....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>1c(1)</b>                  | 1027451               | 1597756         |
| <b>(2)</b> U.S. Government securities .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>1c(2)</b>                  |                       |                 |
| <b>(3)</b> Corporate debt instruments (other than employer securities):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |                       |                 |
| <b>(A)</b> Preferred .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>1c(3)(A)</b>               |                       |                 |
| <b>(B)</b> All other .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>1c(3)(B)</b>               |                       |                 |
| <b>(4)</b> Corporate stocks (other than employer securities):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                       |                 |
| <b>(A)</b> Preferred .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>1c(4)(A)</b>               |                       |                 |
| <b>(B)</b> Common.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>1c(4)(B)</b>               |                       |                 |
| <b>(5)</b> Partnership/joint venture interests .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>1c(5)</b>                  |                       |                 |
| <b>(6)</b> Real estate (other than employer real property) .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>1c(6)</b>                  |                       |                 |
| <b>(7)</b> Loans (other than to participants).....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>1c(7)</b>                  |                       |                 |
| <b>(8)</b> Participant loans.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>1c(8)</b>                  | 26799                 | 88975           |
| <b>(9)</b> Value of interest in common/collective trusts.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>1c(9)</b>                  |                       |                 |
| <b>(10)</b> Value of interest in pooled separate accounts .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>1c(10)</b>                 |                       |                 |
| <b>(11)</b> Value of interest in master trust investment accounts.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>1c(11)</b>                 |                       |                 |
| <b>(12)</b> Value of interest in 103-12 investment entities .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>1c(12)</b>                 |                       |                 |
| <b>(13)</b> Value of interest in registered investment companies (e.g., mutual funds).....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>1c(13)</b>                 | 30117914              | 27561534        |
| <b>(14)</b> Value of funds held in insurance company general account (unallocated contracts).....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>1c(14)</b>                 |                       |                 |
| <b>(15)</b> Other .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>1c(15)</b>                 |                       |                 |

| <b>1d</b> Employer-related investments:                              |              | (a) Beginning of Year | (b) End of Year |
|----------------------------------------------------------------------|--------------|-----------------------|-----------------|
| (1) Employer securities .....                                        | <b>1d(1)</b> |                       |                 |
| (2) Employer real property .....                                     | <b>1d(2)</b> |                       |                 |
| <b>e</b> Buildings and other property used in plan operation .....   | <b>1e</b>    |                       |                 |
| <b>f</b> Total assets (add all amounts in lines 1a through 1e) ..... | <b>1f</b>    | 31172164              | 29248265        |

**Liabilities**

|                                                                           |           |   |   |
|---------------------------------------------------------------------------|-----------|---|---|
| <b>g</b> Benefit claims payable .....                                     | <b>1g</b> |   |   |
| <b>h</b> Operating payables .....                                         | <b>1h</b> |   |   |
| <b>i</b> Acquisition indebtedness .....                                   | <b>1i</b> |   |   |
| <b>j</b> Other liabilities .....                                          | <b>1j</b> |   |   |
| <b>k</b> Total liabilities (add all amounts in lines 1g through 1j) ..... | <b>1k</b> | 0 | 0 |

**Net Assets**

|                                                           |           |          |          |
|-----------------------------------------------------------|-----------|----------|----------|
| <b>l</b> Net assets (subtract line 1k from line 1f) ..... | <b>1l</b> | 31172164 | 29248265 |
|-----------------------------------------------------------|-----------|----------|----------|

**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 |
|------------------------------------------------------------------------------------------------------------|-----------------|------------|-----------|
| <b>a Contributions:</b>                                                                                    |                 |            |           |
| (1) Received or receivable in cash from: <b>(A)</b> Employers .....                                        | <b>2a(1)(A)</b> | 2038308    |           |
| <b>(B)</b> Participants .....                                                                              | <b>2a(1)(B)</b> | 2067658    |           |
| <b>(C)</b> Others (including rollovers) .....                                                              | <b>2a(1)(C)</b> | 104278     |           |
| (2) Noncash contributions .....                                                                            | <b>2a(2)</b>    |            |           |
| (3) Total contributions. Add lines <b>2a(1)(A)</b> , <b>(B)</b> , <b>(C)</b> , and line <b>2a(2)</b> ..... | <b>2a(3)</b>    |            | 4210244   |
| <b>b Earnings on investments:</b>                                                                          |                 |            |           |
| (1) Interest:                                                                                              |                 |            |           |
| <b>(A)</b> Interest-bearing cash (including money market accounts and certificates of deposit) .....       | <b>2b(1)(A)</b> | 21897      |           |
| <b>(B)</b> U.S. Government securities .....                                                                | <b>2b(1)(B)</b> |            |           |
| <b>(C)</b> Corporate debt instruments .....                                                                | <b>2b(1)(C)</b> |            |           |
| <b>(D)</b> Loans (other than to participants) .....                                                        | <b>2b(1)(D)</b> | 0          |           |
| <b>(E)</b> Participant loans .....                                                                         | <b>2b(1)(E)</b> | 4455       |           |
| <b>(F)</b> Other .....                                                                                     | <b>2b(1)(F)</b> |            |           |
| <b>(G)</b> Total interest. Add lines <b>2b(1)(A)</b> through <b>(F)</b> .....                              | <b>2b(1)(G)</b> |            | 26352     |
| (2) Dividends: <b>(A)</b> Preferred stock .....                                                            | <b>2b(2)(A)</b> |            |           |
| <b>(B)</b> Common stock .....                                                                              | <b>2b(2)(B)</b> |            |           |
| <b>(C)</b> Registered investment company shares (e.g. mutual funds) .....                                  | <b>2b(2)(C)</b> | 550427     |           |
| <b>(D)</b> Total dividends. Add lines <b>2b(2)(A)</b> , <b>(B)</b> , and <b>(C)</b> .....                  | <b>2b(2)(D)</b> |            | 550427    |
| (3) Rents .....                                                                                            | <b>2b(3)</b>    |            |           |
| (4) Net gain (loss) on sale of assets: <b>(A)</b> Aggregate proceeds .....                                 | <b>2b(4)(A)</b> |            |           |
| <b>(B)</b> Aggregate carrying amount (see instructions) .....                                              | <b>2b(4)(B)</b> |            |           |
| <b>(C)</b> Subtract line <b>2b(4)(B)</b> from line <b>2b(4)(A)</b> and enter result .....                  | <b>2b(4)(C)</b> |            | 0         |
| (5) Unrealized appreciation (depreciation) of assets: <b>(A)</b> Real estate .....                         | <b>2b(5)(A)</b> |            |           |
| <b>(B)</b> Other .....                                                                                     | <b>2b(5)(B)</b> |            |           |
| <b>(C)</b> Total unrealized appreciation of assets. Add lines <b>2b(5)(A)</b> and <b>(B)</b> .....         | <b>2b(5)(C)</b> |            | 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) |            | -5654061  |
| c Other income .....                                                                            | 2c     |            |           |
| d Total income. Add all <b>income</b> amounts in column (b) and enter total .....               | 2d     |            | -867038   |
| <b>Expenses</b>                                                                                 |        |            |           |
| e Benefit payment and payments to provide benefits:                                             |        |            |           |
| (1) Directly to participants or beneficiaries, including direct rollovers .....                 | 2e(1)  | 1056141    |           |
| (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)  |            | 1056141   |
| 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)  |            |           |
| (2) Contract administrator fees .....                                                           | 2i(2)  | 720        |           |
| (3) Investment advisory and management fees .....                                               | 2i(3)  |            |           |
| (4) Other .....                                                                                 | 2i(4)  |            |           |
| (5) Total administrative expenses. Add lines 2i(1) through (4) .....                            | 2i(5)  |            | 720       |
| j Total expenses. Add all <b>expense</b> amounts in column (b) and enter total .....            | 2j     |            | 1056861   |
| <b>Net Income and Reconciliation</b>                                                            |        |            |           |
| k Net income (loss). Subtract line 2j from line 2d .....                                        | 2k     |            | -1923899  |
| l Transfers of assets:                                                                          |        |            |           |
| (1) To this plan .....                                                                          | 2l(1)  |            |           |
| (2) From this plan .....                                                                        | 2l(2)  |            |           |

**Part III Accountant's Opinion**

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

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

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

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

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

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

(1) Name: BDO USA P.C

(2) EIN: 13-5381590

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

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

**Part IV Compliance Questions**

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

During the plan year:

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

|    | Yes | No | Amount |
|----|-----|----|--------|
| 4a |     | X  |        |

|                                                                                                                                                                                                                                                                                                            | Yes | No | Amount |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|--------|
| <b>b</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.) |     |    |        |
| <b>4b</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>c</b> 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.)                                                                                                                             |     |    |        |
| <b>4c</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>d</b> 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.)                                                                                                                  |     |    |        |
| <b>4d</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>e</b> Was this plan covered by a fidelity bond?                                                                                                                                                                                                                                                         | X   |    | 500000 |
| <b>f</b> Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?                                                                                                                                                                          |     | X  |        |
| <b>4f</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>g</b> 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?                                                                                                                                       |     |    |        |
| <b>4g</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>h</b> 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?                                                                                                                             |     |    |        |
| <b>4h</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>i</b> Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.)                                                                                                                                                   | X   |    |        |
| <b>4i</b>                                                                                                                                                                                                                                                                                                  | X   |    |        |
| <b>j</b> 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.)                                                                                     |     |    |        |
| <b>4j</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>k</b> Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?                                                                                                                                              |     |    |        |
| <b>4k</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>l</b> Has the plan failed to provide any benefit when due under the plan?                                                                                                                                                                                                                               |     |    |        |
| <b>4l</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>m</b> If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)                                                                                                                                                                                     |     |    |        |
| <b>4m</b>                                                                                                                                                                                                                                                                                                  |     | X  |        |
| <b>n</b> 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.                                                                                                                        |     |    |        |
| <b>4n</b>                                                                                                                                                                                                                                                                                                  |     |    |        |

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

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

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

**5c** Was the plan a defined benefit plan covered under the PBGC insurance program at any time during this plan year? (See ERISA section 4021 and instructions.) ☐ Yes ☐ No ☐ Not determined

If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year \_\_\_\_\_.

|                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                  |                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <div>SCHEDULE R<br/>(Form 5500)<br/><br/>Department of the Treasury<br/>Internal Revenue Service<br/><br/>Department of Labor<br/>Employee Benefits Security Administration<br/><br/>Pension Benefit Guaranty Corporation</div>                                                                                                                            | <div>Retirement Plan Information</div> <div>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).</div> <div>► File as an attachment to Form 5500.</div> | <div>OMB No. 1210-0110</div> <div>2022</div> <div>This Form is Open to Public Inspection.</div> |
| For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                  |                                                                                                 |
| A Name of plan<br>MARSHALL WACE NORTH AMERICA LP 401(K) PROFIT SHARING & TRUST                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                  | B Three-digit plan number (PN) ► 001                                                            |
| C Plan sponsor's name as shown on line 2a of Form 5500<br>MARSHALL WACE NORTH AMERICA, LP                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                  | D Employer Identification Number (EIN)<br>47-0943020                                            |
| 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):<br><br>EIN(s): 45-0404698                                                                                                       |                                                                                                                                                                                                                                                                                                  |                                                                                                 |
| 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)? ..... <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A<br>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 _____<br>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? ..... <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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? ..... <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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..... <input type="checkbox"/> Increase <input type="checkbox"/> Decrease <input type="checkbox"/> Both <input type="checkbox"/> 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?..... <input type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                  |                                                                                                 |
| 11 a Does the ESOP hold any preferred stock?..... <input type="checkbox"/> Yes <input type="checkbox"/> 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.)..... <input type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                              |                                                                                                                                                                                                                                                                                                  |                                                                                                 |
| 12 Does the ESOP hold any stock that is not readily tradable on an established securities market?..... <input type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                  |                                                                                                 |
| For Paperwork Reduction Act Notice, see the Instructions for Form 5500.                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                  |                                                                                                 |
| Schedule R (Form 5500) 2022 v. 220413                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                  |                                                                                                 |

**Part V Additional Information for Multiemployer Defined Benefit Pension Plans**

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

**a** Name of contributing employer

**b** EIN

**c** Dollar amount contributed by employer

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

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

(1) Contribution rate (in dollars and cents) \_\_\_\_\_

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

**a** Name of contributing employer

**b** EIN

**c** Dollar amount contributed by employer

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

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

(1) Contribution rate (in dollars and cents) \_\_\_\_\_

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

**a** Name of contributing employer

**b** EIN

**c** Dollar amount contributed by employer

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

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

(1) Contribution rate (in dollars and cents) \_\_\_\_\_

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

**a** Name of contributing employer

**b** EIN

**c** Dollar amount contributed by employer

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

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

(1) Contribution rate (in dollars and cents) \_\_\_\_\_

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

**a** Name of contributing employer

**b** EIN

**c** Dollar amount contributed by employer

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

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

(1) Contribution rate (in dollars and cents) \_\_\_\_\_

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

**a** Name of contributing employer

**b** EIN

**c** Dollar amount contributed by employer

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

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

(1) Contribution rate (in dollars and cents) \_\_\_\_\_

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

|                                                                                                                                                                                                                                                                                                                                 |            |            |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|
| <b>14</b> Enter the number of deferred vested and retired participants (inactive participants), as of the beginning of the plan year, whose contributing employer is no longer making contributions to the plan for:                                                                                                            | <b>14a</b> |            |            |
| <b>a</b> The current plan year. Check the box to indicate the counting method used to determine the number of inactive participants: <input type="checkbox"/> last contributing employer <input type="checkbox"/> alternative <input type="checkbox"/> reasonable approximation (see instructions for required attachment)..... |            | <b>14b</b> |            |
| <b>b</b> The plan year immediately preceding the current plan year. <input type="checkbox"/> Check the box if the number reported is a change from what was previously reported (see instructions for required attachment) .....                                                                                                |            |            | <b>14c</b> |
| <b>c</b> The second preceding plan year. <input type="checkbox"/> Check the box if the number reported is a change from what was previously reported (see instructions for required attachment) .....                                                                                                                           |            |            |            |
| <b>15</b> 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:                                                                                                                                          | <b>15a</b> |            |            |
| <b>a</b> The corresponding number for the plan year immediately preceding the current plan year.....                                                                                                                                                                                                                            |            | <b>15b</b> |            |
| <b>b</b> The corresponding number for the second preceding plan year.....                                                                                                                                                                                                                                                       |            |            |            |
| <b>16</b> Information with respect to any employers who withdrew from the plan during the preceding plan year:                                                                                                                                                                                                                  | <b>16a</b> |            |            |
| <b>a</b> Enter the number of employers who withdrew during the preceding plan year .....                                                                                                                                                                                                                                        |            | <b>16b</b> |            |
| <b>b</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.....                                                                                                                                                           |            |            |            |
| <b>17</b> 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 ..... <input type="checkbox"/>                                                                  |            |            |            |

**Part VI Additional Information for Single-Employer and Multiemployer Defined Benefit Pension Plans**

**18** If any liabilities to participants or their beneficiaries under the plan as of the end of the plan year consist (in whole or in part) of liabilities to such participants and beneficiaries under two or more pension plans as of immediately before such plan year, check box and see instructions regarding supplemental information to be included as an attachment ..... ☐

**19** If the total number of participants is 1,000 or more, complete lines (a) through (c)

**a** Enter the percentage of plan assets held as:  
 Stock: \_\_\_\_\_% Investment-Grade Debt: \_\_\_\_\_% High-Yield Debt: \_\_\_\_\_% Real Estate: \_\_\_\_\_% Other: \_\_\_\_\_%

**b** Provide the average duration of the combined investment-grade and high-yield debt:  
☐ 0-3 years ☐ 3-6 years ☐ 6-9 years ☐ 9-12 years ☐ 12-15 years ☐ 15-18 years ☐ 18-21 years ☐ 21 years or more

**c** What duration measure was used to calculate line 19(b)?  
☐ Effective duration ☐ Macaulay duration ☐ Modified duration ☐ Other (specify): \_\_\_\_\_

**20 PBGC missed contribution reporting requirements.** If this is a multiemployer plan or a single-employer plan that is not covered by PBGC, skip line 20.

**a** Is the amount of unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40 greater than zero? ☐ Yes ☐ No

**b** If line 20a is "Yes," has PBGC been notified as required by ERISA sections 4043(c)(5) and/or 303(k)(4)? Check the applicable box:

☐ Yes.

☐ No. Reporting was waived under 29 CFR 4043.25(c)(2) because contributions equal to or exceeding the unpaid minimum required contribution were made by the 30th day after the due date.

☐ No. The 30-day period referenced in 29 CFR 4043.25(c)(2) has not yet ended, and the sponsor intends to make a contribution equal to or exceeding the unpaid minimum required contribution by the 30th day after the due date.

☐ No. Other. Provide explanation \_\_\_\_\_



## **Marshall Wace North America LP 401(K) Profit Sharing & Trust**

### **Financial Statements and ERISA - Required Supplemental Schedule**

**As of December 31, 2022 and 2021 and for the year  
ended December 31, 2022**

**Marshall Wace North America LP**  
**401(K) Profit Sharing & Trust**

---

Financial Statements and ERISA - Required Supplemental Schedule  
As of December 31, 2022 and 2021 and for the year ended December 31, 2022

# **Marshall Wace North America LP 401(K) Profit Sharing & Trust**

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### **ERISA-Required Supplemental Schedule**

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Note: Other schedules required by Section 2520.103.10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the ERISA have been omitted because they are not applicable.



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USA

## Independent Auditor's Report

The Plan Administrator  
Marshall Wace North America LP  
401(K) Profit Sharing & Trust  
New York, New York

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

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

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

Management has obtained certifications from a qualified institution as of December 31, 2022 and 2021, and for the year ended December 31, 2022, stating that the certified investment information, as described in Note 4 to the financial statements, is complete and accurate.

### *Opinion*

In our opinion, based on our audits and the procedures performed as described in the Auditor's Responsibilities for the Audits of the Financial Statements section of our report:

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



### ***Basis for Opinion***

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

### ***Responsibilities of Management for the Financial Statements***

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

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

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

### ***Auditor's Responsibilities for the Audits of the Financial Statements***

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



In performing an audit in accordance with GAAS, we:

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

Our audits did not extend to the certified investment information, except for obtaining and reading the certifications, comparing the certified investment information with the related information presented and disclosed in the financial statements, and reading the disclosures relating to the certified investment information to assess whether they are in accordance with the presentation and disclosure requirements of GAAP.

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

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

***Other Matter -Supplemental Schedule Required by ERISA***

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



information included in the supplemental schedule that agreed to or is derived from the certified investment information, we compared such information to the related certified investment information.

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

In our opinion:

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

BDO USA, P.C.

September 25, 2023

## Financial Statements

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**Marshall Wace North America LP  
401(K) Profit Sharing & Trust**

**Statements of Net Assets Available for Benefits**

| <i>December 31,</i>                      | <b>2022</b>          | <b>2021</b>          |
|------------------------------------------|----------------------|----------------------|
| <b>Assets</b>                            |                      |                      |
| Investments, at fair value:              |                      |                      |
| Mutual funds                             | \$ 27,561,534        | \$ 30,117,914        |
| Money market fund                        | 1,597,756            | 1,027,451            |
| <b>Total Investments, at fair value</b>  | <b>29,159,290</b>    | <b>31,145,365</b>    |
| Notes receivable from participants       | 88,975               | 26,799               |
| <b>Net Assets Available for Benefits</b> | <b>\$ 29,248,265</b> | <b>\$ 31,172,164</b> |

*See accompanying notes to the financial statements.*

**Marshall Wace North America LP  
401(K) Profit Sharing & Trust**

**Statement of Changes in Net Assets Available for Benefits**

*Year ended December 31, 2022*

|                                                              |                      |
|--------------------------------------------------------------|----------------------|
| <b>(Reductions) Additions</b>                                |                      |
| Investment (loss) income:                                    |                      |
| Net (depreciation) appreciation in fair value of investments | \$ (5,654,061)       |
| Dividend and interest income                                 | 572,324              |
| <b>Total Investment Loss</b>                                 | <b>(5,081,737)</b>   |
| Interest income on notes receivables from participants       | 4,455                |
| Contributions:                                               |                      |
| Employer                                                     | 2,038,308            |
| Participants                                                 | 2,067,658            |
| Rollovers                                                    | 104,278              |
| <b>Total Contributions</b>                                   | <b>4,210,244</b>     |
| <b>Total Net Reductions</b>                                  | <b>(867,038)</b>     |
| <b>Deductions</b>                                            |                      |
| Benefits paid to participants                                | 1,056,141            |
| Administrative expenses                                      | 720                  |
| <b>Total Deductions</b>                                      | <b>1,056,861</b>     |
| <b>Net Decrease</b>                                          | <b>(1,923,899)</b>   |
| <b>Net Assets Available for Benefits, beginning of year</b>  | <b>31,172,164</b>    |
| <b>Net Assets Available for Benefits, end of year</b>        | <b>\$ 29,248,265</b> |

*See accompanying notes to financial statements.*

# **Marshall Wace North America LP 401(K) Profit Sharing & Trust**

## **Notes to Financial Statements**

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### **1. Description of Plan**

The following description of the Marshall Wace North America LP 401(K) Profit Sharing & Trust (the Plan) provides general information only. Participants should refer to the Plan agreement for a more complete description of the Plan's provisions.

#### ***General***

Effective January 1, 2004, Marshall Wace North America, LP (the Employer or the Company) established the Plan. The Plan is a defined contribution 401(K) Plan covering substantially all employees of the Company. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA), as amended.

#### ***Eligibility***

Employees of the Company, as defined in the Plan document, must be 21 years of age or older to be eligible to participate in elective deferral contributions and receive matching contributions. Additionally, employees who are age 21 or older are eligible to participate in profit sharing contributions. Employees subject to a collective bargaining agreement, leased employees and non-resident aliens are not eligible to participate in the Plan.

#### ***Participant Contributions***

Eligible employees are automatically enrolled in the Plan at 10% of the employee's pre-tax wages unless the employee affirmatively elects not to participate. The Plan allows each participant to contribute from 1% to 80% of his or her annual compensation, as defined, up to the maximum annual amount allowed by law. If participants elect a deferral percentage of less than 10%, it will automatically be increased to 10% on the first day of the following calendar year unless the participant explicitly elects the deferral percentage of less than 10% during the Plan sponsor's annual open enrollment period. Rollovers, after-tax contributions, and catch-up contributions are allowed. In-plan Roth rollovers, as defined, are allowed.

#### ***Employer Contributions***

The Employer makes a matching contribution on elective deferral contributions or catch-up contributions, or a discretionary profit-sharing contribution to the Plan, which is allocated to the eligible accounts based on an integrated allocation formula, as defined in the Plan document. The matching contribution is calculated at 100% of up to 10% of participant deferrals. For the year ended December 31, 2022, the employer matching contribution totaled \$2,048,706. \$10,398 of forfeitures were used to pay the Employer matching contribution. No discretionary profit-sharing contribution was made for the year ended December 31, 2022.

#### ***Participant Accounts***

The Plan is a participant-directed account plan. Participants direct the investment of their contributions into various investment options offered by the Plan. Participant's accounts are credited with participant contributions, rollovers, and an allocation of any Employer contributions. Plan earnings are allocated to participant accounts based on the earnings of the specific mutual funds selected by the participant and administrative expenses are allocated based upon a participant's

# **Marshall Wace North America LP 401(K) Profit Sharing & Trust**

## **Notes to Financial Statements**

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account balance in proportion to the balances of all participant's accounts. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested accounts.

### ***Vesting***

Participants are always 100% vested in their elective deferrals, rollovers, catch-up contributions, and after-tax contributions, plus actual earnings thereon. Participants become fully vested in the Company's matching contributions and profit-sharing contributions and earnings after one year of service.

Participants who reach the normal retirement age, as defined by the Internal Revenue Code (the IRC), and who are still employed with the Company at that time, become 100% vested in their account balance. In addition, participants who die or become disabled while still employed with the Company become 100% vested in their account balance.

### ***Investment Options***

Contributions are invested by Ascensus Trust Company (Ascensus or the Trustee) according to the options elected by the participants. All participant and Employer contributions are directed by the participant among the available investment options. Investment earnings are automatically reinvested into the fund or portfolio from which they were derived.

### ***Notes Receivable from Participants***

Participant loans are allowed at a minimum is \$1,000 not to exceed a maximum of \$50,000 or 50% of the participant's account balance, excluding participant Roth deferrals and earnings, whichever is less. The loans are secured by the participant's vested account balances and, except for loans used to acquire a principal residence, must have a repayment period of no greater than five years. Loan transactions are treated as a directed investment from the participant's account under the Plan. Interest is calculated at the prime rate, as determined monthly by the Wall Street Journal, plus 2% at the time of the loan. At December 31, 2022 and 2021, all loans bear interest ranging from 5.25% to 6.75%. Principal and interest are paid ratably through payroll deductions every pay period. No more than one note is allowed at any time and repayment of the entire balance is permitted at any time. These loans are subject to certain restrictions as defined by the plan document and applicable restrictions under the IRC.

### ***Payment of Benefits***

Participants' benefits under the Plan are payable to participants or their beneficiaries upon termination of employment, normal retirement, disability, financial hardship or death. Benefits are payable in one lump sum payment. Partial or installment payments are permitted only to satisfy required minimum distribution rules. Hardship withdrawals are available, as are in-service distributions to participants who have attained the age of 59½. Corrective distributions are made, returning contributions to participants, when employee contributions exceed contribution limitations imposed by Department of Labor (DOL) regulations. If a participant's employment terminates with the Employer, the Plan permits distribution of the participant's account, not in excess of \$5,000, to be cashed out or transferred to an IRA without the participant's consent.

# **Marshall Wace North America LP 401(K) Profit Sharing & Trust**

## **Notes to Financial Statements**

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### ***Forfeited Accounts***

Forfeitures may be used to pay plan expenses or to reduce Employer contributions. For the year ended December 31, 2022, forfeitures used to offset Employer matching contributions were \$10,398. There were no forfeitures balances as of December 31, 2022 and 2021.

## **2. Summary of Significant Accounting Policies**

### ***Basis of Accounting***

The accompanying financial statements of the Plan are prepared under the accrual method of accounting in accordance with accounting principles generally accepted in the United States of America (GAAP).

### ***Estimates***

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of net assets available for benefits and changes therein, and when applicable, disclosure of contingent assets and liabilities. Actual results may differ from those estimates.

### ***Notes Receivable from Participants***

Notes receivable from participants are measured at their unpaid principal balance plus any accrued but unpaid interest. Interest income is recorded on the accrual basis. Related fees are recorded as administrative expenses and are expensed when they are incurred. No allowance for credit losses has been recorded as of December 31, 2022 and 2021. If a participant ceases to make loan repayments and the Plan administrator deems the participant loan to be in default, the participant loan balance is reduced, and a benefit payment is recorded.

### ***Payment of Benefits***

Benefit payments to participants and beneficiaries are recorded when paid.

### ***Investment Valuation and Income Recognition***

The Plan's investments are stated at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company determines the Plan's valuation policies utilizing information provided by the investment advisor and the Trustee. See Note 3 for discussion of fair value measurements.

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

# Marshall Wace North America LP

## 401(K) Profit Sharing & Trust

### Notes to Financial Statements

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#### *Administrative Expenses*

Administrative expenses of the Plan are paid by the Company, except for certain expenses that are charged to participant accounts, including loan, withdrawal fees, plan administrative fees, and investment management fees. Certain investment expenses which are charged within investments are presented net of the appreciation in fair value of investments. All other expenses of the Plan for the year ended December 31, 2022 were paid by the Company and are excluded from these financial statements.

Direct compensation paid by the Plan as administrative expenses totaled \$720 for the year ended December 31, 2022, which consisted of third-party administrative fees.

### **3. Fair Value Measurements**

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

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

Level 2 - Inputs to the valuation methodology include:

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

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

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

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

# Marshall Wace North America LP 401(K) Profit Sharing & Trust

## Notes to Financial Statements

The following tables set forth by level, within the fair value hierarchy, the Plan's investments measured at fair value on a recurring basis as of December 31, 2022 and 2021. There have been no changes to the valuation methodologies used at December 31, 2022 and 2021.

### *December 31, 2022*

|                                         | Level 1              | Level 2     | Level 3     | Total                |
|-----------------------------------------|----------------------|-------------|-------------|----------------------|
| Money market fund                       | \$ 1,597,756         | \$ -        | \$ -        | \$ 1,597,756         |
| Mutual funds                            | 27,561,534           | -           | -           | 27,561,534           |
| <b>Total Investments, at fair value</b> | <b>\$ 29,159,290</b> | <b>\$ -</b> | <b>\$ -</b> | <b>\$ 29,159,290</b> |

### *December 31, 2021*

|                                         | Level 1              | Level 2     | Level 3     | Total                |
|-----------------------------------------|----------------------|-------------|-------------|----------------------|
| Money market fund                       | \$ 1,027,451         | \$ -        | \$ -        | \$ 1,027,451         |
| Mutual funds                            | 30,117,914           | -           | -           | 30,117,914           |
| <b>Total Investments, at fair value</b> | <b>\$ 31,145,365</b> | <b>\$ -</b> | <b>\$ -</b> | <b>\$ 31,145,365</b> |

*Mutual Funds* - Mutual funds are valued at the daily closing price as reported by the fund. Mutual funds held by the Plan are open-ended funds that are registered with the Securities and Exchange Commission. These funds are required to publish their daily net asset value and to transact at that price. The mutual funds held by the Plan are deemed to be actively traded.

*Money Market Funds* - Valued at the daily closing price as reported by the fund.

The preceding methods described may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Plan believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

## 4. Certified Investments

The Plan administrator has elected the method of annual reporting compliance permitted by ERISA Section 103(a)(3)(C) pursuant to 29 CFR 2520.103-8 of the DOL's Rules and Regulations for Reporting and Disclosure under ERISA. Accordingly, Ascensus Trust Company, a qualified institution, has certified that the following investment information included in the accompanying financial statements and ERISA-required supplemental schedule is complete and accurate:

- Investments and notes receivable from participants reflected on the accompanying statements of net assets available for benefits as of December 31, 2022 and 2021.
- Net depreciation in fair value of investments, dividend and interest income, and interest income on notes receivable from participants reflected on the accompanying statement of changes in net assets available for benefits for the year ended December 31, 2022.
- Investments reflected on the supplemental Schedule of Assets (Held at End of Year) as of December 31, 2022.

# **Marshall Wace North America LP 401(K) Profit Sharing & Trust**

## **Notes to Financial Statements**

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At the request of the Plan administrator, the Plan's independent auditors did not perform auditing procedures with respect to this certified investment information, except for comparing such certified investment information to the related investment information included in the financial statements and ERISA-required supplemental schedule.

### **5. Tax Status**

The Plan obtained the latest opinion letter for the volume submitter plan it has adopted on June 30, 2020, in which the Internal Revenue Service (IRS) stated that the pre-approved profit-sharing plan, as then designed, was in compliance with the applicable requirements of the Internal Revenue Code (IRC). The Plan has been amended since receiving the determination letter. However, the Plan administrator believes that the Plan is currently designed and being operated in compliance with the applicable requirements of the IRC and, therefore, believes that the Plan is qualified, and the related trust is tax-exempt.

GAAP requires Plan management to evaluate tax positions taken by the Plan and recognize a tax liability (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 is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress.

### **6. Risk and Uncertainties**

The Plan invests in various publicly traded mutual funds and a money market fund. These investments are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with these investments, it is at least reasonably possible that changes in the values of these investments will occur in the near term and that such changes could materially affect participants' account balances and the amounts reported in the statements of net assets available for benefits.

### **7. Plan Termination**

Although it has not expressed any intent to do so, the Employer has the right at any time to terminate the Plan in accordance with ERISA by delivering to the Trustee and third-party administrator written notice of such termination. Upon termination of the Plan, no further contributions will be made to the Plan, all participants' accounts will become fully vested and shall be distributed in accordance with the provisions of the Plan.

### **8. Related Parties/Parties-in-Interest**

The Company, Ascensus Trust Company, the Trustee, the Vanguard Group, the record-keeper, and Retirement Resources Investment Corporation, the investment advisor, are parties-in-interest with respect to the Plan under the provisions of ERISA. The Plan also issues loans to participants which are secured by the vested balance of the participants' account. These transactions qualify as party-in-interest transactions which are exempt from prohibited transaction rules. Fees incurred by the Plan for the investment management services are included as a reduction in the net appreciation in fair value of investments.

**Marshall Wace North America LP  
401(K) Profit Sharing & Trust**

**Notes to Financial Statements**

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**9. Subsequent Events**

The Plan's administrator has evaluated subsequent events through September 25, 2023, the date the financial statements were available to be issued. No subsequent events that would require disclosure in these financial statements have been noted as of this date.

## **ERISA-Required Supplemental Schedule**

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# Marshall Wace North America LP 401(K) Profit Sharing & Trust

**Schedule H (Form 5500), Line 4i - Schedule of Assets (Held at End of Year)**  
**EIN: 47-0943020** **Plan No.: 001**

*December 31, 2022*

| (a) | (b)                                                       | (c)                                                                                                               | (d)    | (e)              |
|-----|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------|------------------|
|     | Identity of Issuer, Borrower,<br>Lessor, or Similar Party | Description of Investment,<br>Including Maturity Date,<br>Rate of Interest, Collateral,<br>Par, or Maturity Value | Cost** | Current<br>Value |
|     | <b>Money Market Fund</b>                                  |                                                                                                                   |        |                  |
| *   | The Vanguard Group                                        | Vanguard Treasury Money Market Fund                                                                               | \$     | 1,597,756        |
|     | <b>Mutual Funds</b>                                       |                                                                                                                   |        |                  |
|     | T. Rowe Price                                             | T. Rowe Price Value Fund I Class                                                                                  |        | 1,295,321        |
| *   | The Vanguard Group                                        | Vanguard Explorer Fund Admiral Shares                                                                             |        | 1,255,442        |
| *   | The Vanguard Group                                        | Vanguard Growth Index Fund Admiral<br>Shares                                                                      |        | 1,157,268        |
| *   | The Vanguard Group                                        | Vanguard Mid Cap Index Fund Admiral<br>Shares                                                                     |        | 1,456,605        |
| *   | The Vanguard Group                                        | Vanguard Selected Value Fund Investor<br>Shares                                                                   |        | 1,132,088        |
| *   | The Vanguard Group                                        | Vanguard Small-Cap Index Fund Admiral<br>Shares                                                                   |        | 1,286,152        |
|     | Fidelity Investments                                      | Fidelity Advisor Total Bond Fund Class Z                                                                          |        | 182,925          |
| *   | The Vanguard Group                                        | Vanguard Real Estate Index Fund Admiral<br>Shares                                                                 |        | 279,590          |
| *   | The Vanguard Group                                        | Vanguard European Stock Index Fund<br>Admiral Shares                                                              |        | 752,279          |
| *   | The Vanguard Group                                        | Vanguard Mid-Cap Growth Index Fund<br>Admiral Shares                                                              |        | 481,875          |
|     | Dimensional Fund Advisors                                 | DFA Emerging Markets Small Cap<br>Portfolio I                                                                     |        | 299,923          |
|     | Massachusetts Financial Services                          | MFS International New Discovery Fund<br>Class R6                                                                  |        | 559,390          |
|     | American Funds                                            | American Funds American Balanced Fund<br>Class R6                                                                 |        | 6,577,288        |
|     | Fidelity Investments                                      | Fidelity Advisor Strategic Income Fund<br>Class Z                                                                 |        | 315,271          |
| *   | The Vanguard Group                                        | Vanguard Total International Stock Index<br>Fund Admiral Shares                                                   |        | 2,598,952        |
|     | Lord Abbett                                               | Lord Abbett Short Duration Income Fund<br>Class R6                                                                |        | 507,179          |
| *   | The Vanguard Group                                        | Vanguard Emerging Markets Stock Index<br>Fund Admiral Shares                                                      |        | 890,095          |
|     | Dimensional Fund Advisors                                 | DFA Commodity Strategy Portfolio Fund                                                                             |        | 716,326          |
| *   | The Vanguard Group                                        | Vanguard Total Stock Market Index Fund<br>Admiral Shares                                                          |        | 5,817,565        |
|     | <b>Total Mutual Funds</b>                                 |                                                                                                                   |        | 27,561,534       |
| *   | <b>Notes Receivable from Participants</b>                 | Earning interest at 5.25% to 6.75%                                                                                |        | 88,975           |
|     | <b>Total</b>                                              |                                                                                                                   | \$     | 29,248,265       |

\* A party-in-interest, as defined by ERISA.

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

|                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                              |                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>SCHEDULE H</b><br><b>(Form 5500)</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>Financial Information</b><br><br>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).<br><br><b>► File as an attachment to Form 5500.</b> | OMB No. 1210-0110                             |
|                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                              | <b>2022</b>                                   |
|                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                              | <b>This Form is Open to Public Inspection</b> |

|                                                               |  |                                               |  |
|---------------------------------------------------------------|--|-----------------------------------------------|--|
| For calendar plan year 2022 or fiscal plan year beginning     |  | and ending                                    |  |
| <b>A</b> Name of plan                                         |  | <b>B</b> Three-digit plan number (PN) ►       |  |
| <b>C</b> Plan sponsor's name as shown on line 2a of Form 5500 |  | <b>D</b> Employer Identification Number (EIN) |  |

|               |                                      |
|---------------|--------------------------------------|
| <b>Part I</b> | <b>Asset and Liability Statement</b> |
|---------------|--------------------------------------|

**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 |
|---------------------------------------------------------------------------------------------------|-----------------|-----------------------|-----------------|
| <b>a</b> Total noninterest-bearing cash.....                                                      | <b>1a</b>       |                       |                 |
| <b>b</b> Receivables (less allowance for doubtful accounts):                                      |                 |                       |                 |
| <b>(1)</b> Employer contributions .....                                                           | <b>1b(1)</b>    |                       |                 |
| <b>(2)</b> Participant contributions.....                                                         | <b>1b(2)</b>    |                       |                 |
| <b>(3)</b> Other .....                                                                            | <b>1b(3)</b>    |                       |                 |
| <b>c</b> General investments:                                                                     |                 |                       |                 |
| <b>(1)</b> Interest-bearing cash (include money market accounts & certificates of deposit) .....  | <b>1c(1)</b>    |                       |                 |
| <b>(2)</b> U.S. Government securities .....                                                       | <b>1c(2)</b>    |                       |                 |
| <b>(3)</b> Corporate debt instruments (other than employer securities):                           |                 |                       |                 |
| <b>(A)</b> Preferred .....                                                                        | <b>1c(3)(A)</b> |                       |                 |
| <b>(B)</b> All other.....                                                                         | <b>1c(3)(B)</b> |                       |                 |
| <b>(4)</b> Corporate stocks (other than employer securities):                                     |                 |                       |                 |
| <b>(A)</b> Preferred .....                                                                        | <b>1c(4)(A)</b> |                       |                 |
| <b>(B)</b> Common .....                                                                           | <b>1c(4)(B)</b> |                       |                 |
| <b>(5)</b> Partnership/joint venture interests .....                                              | <b>1c(5)</b>    |                       |                 |
| <b>(6)</b> Real estate (other than employer real property) .....                                  | <b>1c(6)</b>    |                       |                 |
| <b>(7)</b> Loans (other than to participants).....                                                | <b>1c(7)</b>    |                       |                 |
| <b>(8)</b> Participant loans .....                                                                | <b>1c(8)</b>    |                       |                 |
| <b>(9)</b> Value of interest in common/collective trusts .....                                    | <b>1c(9)</b>    |                       |                 |
| <b>(10)</b> Value of interest in pooled separate accounts .....                                   | <b>1c(10)</b>   |                       |                 |
| <b>(11)</b> Value of interest in master trust investment accounts.....                            | <b>1c(11)</b>   |                       |                 |
| <b>(12)</b> Value of interest in 103-12 investment entities .....                                 | <b>1c(12)</b>   |                       |                 |
| <b>(13)</b> Value of interest in registered investment companies (e.g., mutual funds) .....       | <b>1c(13)</b>   |                       |                 |
| <b>(14)</b> Value of funds held in insurance company general account (unallocated contracts)..... | <b>1c(14)</b>   |                       |                 |
| <b>(15)</b> Other.....                                                                            | <b>1c(15)</b>   |                       |                 |

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

**Liabilities**

|                                                                           |           |  |  |
|---------------------------------------------------------------------------|-----------|--|--|
| <b>g</b> Benefit claims payable .....                                     | <b>1g</b> |  |  |
| <b>h</b> Operating payables .....                                         | <b>1h</b> |  |  |
| <b>i</b> Acquisition indebtedness.....                                    | <b>1i</b> |  |  |
| <b>j</b> Other liabilities.....                                           | <b>1j</b> |  |  |
| <b>k</b> Total liabilities (add all amounts in lines 1g through 1j) ..... | <b>1k</b> |  |  |

**Net Assets**

|                                                           |           |  |  |
|-----------------------------------------------------------|-----------|--|--|
| <b>l</b> Net assets (subtract line 1k from line 1f) ..... | <b>1l</b> |  |  |
|-----------------------------------------------------------|-----------|--|--|

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

|                                                                                                 |        | (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) |            |           |
| c Other income .....                                                                            | 2c     |            |           |
| d Total income. Add all <b>income</b> amounts in column (b) and enter total.....                | 2d     |            |           |

**Expenses**

|                                                                                     |       |  |  |
|-------------------------------------------------------------------------------------|-------|--|--|
| e Benefit payment and payments to provide benefits:                                 |       |  |  |
| (1) Directly to participants or beneficiaries, including direct rollovers.....      | 2e(1) |  |  |
| (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) |  |  |
| 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) |  |  |
| (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) |  |  |
| j Total expenses. Add all <b>expense</b> amounts in column (b) and enter total..... | 2j    |  |  |

**Net Income and Reconciliation**

|                                                         |       |  |  |
|---------------------------------------------------------|-------|--|--|
| k Net income (loss). Subtract line 2j from line 2d..... | 2k    |  |  |
| l Transfers of assets:                                  |       |  |  |
| (1) To this plan.....                                   | 2l(1) |  |  |
| (2) From this plan .....                                | 2l(2) |  |  |

**Part III Accountant's Opinion**

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

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

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

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

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

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

(1) Name:

(2) EIN:

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

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

**Part IV Compliance Questions**

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

During the plan year:

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

|    | Yes | No | Amount |
|----|-----|----|--------|
| 4a |     |    |        |

|                                                                                                                                                                                                                                                                                                                                                                                                 | Yes                 | No                 | Amount |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------|--------|
| <b>b</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.) .....                                                                                |                     |                    |        |
| <b>4b</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>c</b> 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.) .....                                                                                                                                                                                                            |                     |                    |        |
| <b>4c</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>d</b> 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.) .....                                                                                                                                                                                                 |                     |                    |        |
| <b>4d</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>e</b> Was this plan covered by a fidelity bond? .....                                                                                                                                                                                                                                                                                                                                        |                     |                    |        |
| <b>4e</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>f</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>4f</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>g</b> 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? .....                                                                                                                                                                                                                      |                     |                    |        |
| <b>4g</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>h</b> 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? .....                                                                                                                                                                                                            |                     |                    |        |
| <b>4h</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>i</b> Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.) .....                                                                                                                                                                                                                                  |                     |                    |        |
| <b>4i</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>j</b> 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.) .....                                                                                                                                                                    |                     |                    |        |
| <b>4j</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>k</b> Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC? .....                                                                                                                                                                                                                             |                     |                    |        |
| <b>4k</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>l</b> Has the plan failed to provide any benefit when due under the plan? .....                                                                                                                                                                                                                                                                                                              |                     |                    |        |
| <b>4l</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>m</b> If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.) .....                                                                                                                                                                                                                                                                    |                     |                    |        |
| <b>4m</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>n</b> 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. ....                                                                                                                                                                                                        |                     |                    |        |
| <b>4n</b>                                                                                                                                                                                                                                                                                                                                                                                       |                     |                    |        |
| <b>5a</b> Has a resolution to terminate the plan been adopted during the plan year or any prior plan year? ..... <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If "Yes," enter the amount of any plan assets that reverted to the employer this year _____.                                                                                                                       |                     |                    |        |
| <b>5b</b> 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.)                                                                                                                                                                                    |                     |                    |        |
| <b>5b(1)</b> Name of plan(s)                                                                                                                                                                                                                                                                                                                                                                    | <b>5b(2)</b> EIN(s) | <b>5b(3)</b> PN(s) |        |
|                                                                                                                                                                                                                                                                                                                                                                                                 |                     |                    |        |
|                                                                                                                                                                                                                                                                                                                                                                                                 |                     |                    |        |
|                                                                                                                                                                                                                                                                                                                                                                                                 |                     |                    |        |
|                                                                                                                                                                                                                                                                                                                                                                                                 |                     |                    |        |
| <b>5c</b> Was the plan a defined benefit plan covered under the PBGC insurance program at any time during this plan year? (See ERISA section 4021 and instructions.) ..... <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not determined<br>If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year _____. |                     |                    |        |

**Attachment to 2022 Form 5500**  
**Schedule H, line 4i - Schedule of Assets (Held at End of Year)**

**Plan Name** Marshall Wace North America LP 401(K) Profit Sharing & Trust

**EIN:** 47-0943020

**Plan Sponsor's Name** MARSHALL WACE NORTH AMERICA, LP

**PN:** 001

| (a) | (b) Identity of issue, 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 |
|-----|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------|-------------------|
|     | MFS                                                       | MFS International New Discovery R6                                                                           | 0        | 559,390           |
|     | Vanguard                                                  | Vanguard Selected Value Inv                                                                                  | 0        | 1,132,088         |
|     | American Funds                                            | American Funds American Balanced R6                                                                          | 0        | 6,577,288         |
|     | Vanguard                                                  | Vanguard Real Estate Index Adm                                                                               | 0        | 279,590           |
|     | Vanguard                                                  | Vanguard Mid Cap Index Adm                                                                                   | 0        | 1,456,605         |
|     | Vanguard                                                  | Vanguard European Stock Index Adm                                                                            | 0        | 752,280           |
|     | Vanguard                                                  | Vanguard Total Intl Stock Index Adm                                                                          | 0        | 2,598,951         |

**Attachment to 2022 Form 5500**  
**Schedule H, line 4i - Schedule of Assets (Held at End of Year)**

**Plan Name** Marshall Wace North America LP 401(K) Profit Sharing & Trust

**EIN:** 47-0943020

**Plan Sponsor's Name** MARSHALL WACE NORTH AMERICA, LP

**PN:** 001

| (a) | (b) Identity of issue, 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 |
|-----|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------|-------------------|
|     | Vanguard                                                  | Vanguard Total Stock Market Index Adm                                                                        | 0        | 5,817,565         |
|     | Vanguard                                                  | Vanguard Small-Cap Index Adm                                                                                 | 0        | 1,286,152         |
|     | Vanguard                                                  | Vanguard Treasury Money Market                                                                               | 0        | 1,597,756         |
|     | DFA                                                       | DFA Commodity Strategy Portfolio Fund                                                                        | 0        | 716,326           |
|     | Lord Abbett                                               | Lord Abbett Short Duration Income R6                                                                         | 0        | 507,179           |
|     | T. Rowe Price                                             | T. Rowe Price Value I                                                                                        | 0        | 1,295,321         |
|     | Vanguard                                                  | Vanguard Explorer Adm                                                                                        | 0        | 1,255,442         |

**Attachment to 2022 Form 5500**  
**Schedule H, line 4i - Schedule of Assets (Held at End of Year)**

**Plan Name** Marshall Wace North America LP 401(K) Profit Sharing & Trust

**EIN:** 47-0943020

**Plan Sponsor's Name** MARSHALL WACE NORTH AMERICA, LP

**PN:** 001

| (a) | (b) Identity of issue, 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 |
|-----|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------|-------------------|
|     | Vanguard                                                  | Vanguard Mid-Cap Growth Index Adm                                                                            | 0        | 481,875           |
|     | DFA                                                       | DFA Emerging Mkts Small Cap Port I                                                                           | 0        | 299,923           |
|     | Fidelity                                                  | Fidelity Advisor Total Bond Z                                                                                | 0        | 182,925           |
|     | Vanguard                                                  | Vanguard Emerging Mkts Stock Idx Adm                                                                         | 0        | 890,095           |
|     | Fidelity                                                  | Fidelity Advisor Strategic Income Z                                                                          | 0        | 315,271           |
|     | Vanguard                                                  | Vanguard Growth Index Adm                                                                                    | 0        | 1,157,268         |
|     | Participant's Loan Account                                | Various Rates and Maturities                                                                                 | 0        | 88,975            |