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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington D.C. 20549

**FORM 11-K**

**(Mark One)**

**ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2018

OR

**TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 001-37702

**THE RETIREMENT AND SAVINGS PLAN FOR  
AMGEN MANUFACTURING, LIMITED**

State Road 31, Kilometer 24.6, Juncos, Puerto Rico 00777  
(Full title and address of the plan)

**AMGEN INC.**

(Name of issuer of the securities held)

**One Amgen Center Drive,  
Thousand Oaks, California**  
(Address of principal executive offices)

**91320-1799**  
(Zip Code)

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**The Retirement and Savings Plan for  
Amgen Manufacturing, Limited**

**Audited Financial Statements  
and Supplemental Schedule**

**Years Ended December 31, 2018 and 2017**

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## Report of Independent Registered Public Accounting Firm

To the Plan Participants and the Plan Administrator of The Retirement and Savings Plan for Amgen Manufacturing, Limited

### Opinion on the Financial Statements

We have audited the accompanying statements of net assets available for benefits of The Retirement and Savings Plan for Amgen Manufacturing, Limited (the Plan) as of December 31, 2018 and 2017, and the related statements of changes in net assets available for benefits for the years then ended, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the net assets available for benefits of the Plan at December 31, 2018 and 2017, and the changes in its net assets available for benefits for the years then ended, in conformity with U.S. generally accepted accounting principles.

### Basis for Opinion

These financial statements are the responsibility of the Plan’s management. Our responsibility is to express an opinion on the Plan’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Plan in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Plan is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Plan’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

### Supplemental Schedule

The accompanying supplemental schedule of assets (held at end of year) as of December 31, 2018, has been subjected to audit procedures performed in conjunction with the audit of the Plan’s financial statements. The information in the supplemental schedule is the responsibility of the Plan’s management. Our audit procedures included determining whether the information reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental schedule. In forming our opinion on the information, we evaluated whether such information, including its form and content, is presented in conformity with the Department of Labor’s Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, the information is fairly stated, in all material respects, in relation to the financial statements as a whole.

/s/ ERNST & YOUNG LLP

We have served as the Plan’s auditor since 1992.

Los Angeles, California

June 17, 2019

**The Retirement and Savings Plan for Amgen Manufacturing, Limited**  
**Statements of Net Assets Available for Benefits**

	December 31,	
	2018	2017
<b>Assets</b>		
Investments at fair value	\$ 407,898,859	\$ 441,446,107
Notes receivable from participants	14,040,310	15,675,786
Other – principally due from broker	470,827	1,530,307
Total assets	422,409,996	458,652,200
<b>Liabilities</b>		
Other – principally due to broker	618,395	278,567
Total liabilities	618,395	278,567
<b>Net assets available for benefits</b>	<b>\$ 421,791,601</b>	<b>\$ 458,373,633</b>

*See accompanying notes.*

**The Retirement and Savings Plan for Amgen Manufacturing, Limited**  
**Statements of Changes in Net Assets Available for Benefits**

	Years Ended December 31,	
	2018	2017
Additions to (deductions from) net assets:		
Employer contributions	\$ 14,104,328	\$ 14,909,331
Participant contributions	13,908,012	13,505,368
Rollover contributions	613,151	887,746
Interest and dividend income	4,464,868	4,261,615
Net realized/unrealized (losses) gains	(11,212,771)	60,953,540
Interest income on notes receivable from participants	661,076	671,549
Benefits paid	(58,529,331)	(9,297,793)
Investment and administrative fees	(591,365)	(579,859)
Net (decrease) increase	(36,582,032)	85,311,497
Net assets available for benefits at beginning of year	458,373,633	373,062,136
Net assets available for benefits at end of year	\$ 421,791,601	\$ 458,373,633

*See accompanying notes.*

**The Retirement and Savings Plan for Amgen Manufacturing, Limited**  
**Notes to Financial Statements**  
**December 31, 2018**

**1. Description of the Plan**

The following description of The Retirement and Savings Plan for Amgen Manufacturing, Limited (the Plan) provides only general information. Participants should refer to the Plan document for a more complete description of the Plan's provisions.

*General*

The Plan was established effective May 1, 1992, and was amended and restated effective January 1, 2017, and subsequently amended, with the most recent amendment adopted on November 1, 2018. The Plan is a defined contribution plan covering substantially all Puerto Rico resident employees of Amgen Manufacturing, Limited (the Company), a wholly owned subsidiary of Amgen Inc. (Amgen). The Plan is intended to qualify under Section 1081.01 of the Puerto Rico Internal Revenue Code of 2011, as amended (the PR Code) (see Note 4, *Income Tax Status*) and section 407(d)(3)(A) of the Employee Retirement Income Security Act of 1974 (ERISA).

*Contributions*

Subject to certain limitations (as defined in the Plan), participants may elect to contribute up to 30% of their eligible compensation in pre-tax contributions and after-tax contributions or a combination of these types of contributions. A participant's pre-tax contributions are subject to PR Code and Plan limitations and could not exceed \$15,000 in 2018 and 2017. Participants may elect to contribute after-tax contributions beginning January 1 of the year following the year the participant was hired. Participant after-tax contributions are subject to PR Code and Plan limitations and could not exceed \$1,500 in 2018 and 2017. Unless an employee has voluntarily enrolled in the Plan or has declined to participate in the Plan within the first 30 days of employment, all newly eligible participants are automatically enrolled in the Plan, and contributions equal to 5% of their eligible compensation are withheld and contributed to the Plan as pre-tax contributions; such contributions are automatically increased by 1% per year until their contributions reach 10% of their eligible compensation. Participants may elect to adjust, cease or resume their contributions at any time.

Participants who are at least age 50 by the close of the Plan year may also elect to make certain additional pre-tax contributions, referred to as catch-up contributions, that are subject to PR Code and Plan limitations and could not exceed \$1,500 in 2018 and 2017. Participants may also contribute pre-tax and after-tax amounts representing distributions from certain other retirement plans qualified in Puerto Rico, referred to as rollover contributions (as defined in the Plan).

Each pay period, the Company makes a non-elective contribution for all eligible participants, whether or not they have elected to make contributions to the Plan, equal to 4% of each participant's eligible compensation up to a maximum of \$11,000 in 2018 and \$10,800 in 2017 (Core Contributions). In addition, the Company makes a contribution equal to amounts contributed by the participant as pre-tax contributions, including catch-up contributions, of up to 5% of eligible compensation (Matching Contributions). Matching Contributions could not exceed \$13,750 in 2018 and \$13,500 in 2017.

Participants select the investments in which their contributions, including their Core Contributions and Matching Contributions (collectively, Company Contributions), are to be invested, electing among various alternatives, including Amgen common stock (Amgen stock). Participants may direct a maximum of 20% of contributions to be invested in Amgen stock. In addition, participants may transfer amounts among the investment options at any time, subject to certain limitations. Notwithstanding the foregoing, if 20% or more of the value of a participant's Plan account is invested in Amgen stock, the Plan document provides that no transfers from other investment options can be made to invest in Amgen stock.

The accounts of participants who had never made an investment election are allocated to investments under a qualified default investment alternative, which is intended to be compliant with ERISA regulations. At any time, participants may elect to alter the investments in their accounts made under a qualified default investment alternative.

*Vesting*

Participants are immediately vested with respect to their contributions, Company Contributions, and earnings and losses (hereafter referred to as earnings) thereon.

**The Retirement and Savings Plan for Amgen Manufacturing, Limited**  
**Notes to Financial Statements (continued)**

*Participant Accounts*

Each participant's account is credited with: (a) the participant's contributions; (b) an allocation of Company Contributions; and (c) earnings. The benefit to which a participant is entitled is the benefit that can be provided from the participant's account.

*Plan Investments*

Participants can invest in any of 16 different asset classes as well as Amgen stock or may actively manage their account under a self-directed brokerage arrangement in which a wider array of investment options are available. The value of an investment in an asset class is determined by its underlying investment vehicles, which may include one or more of the following: mutual funds, collective trust funds and portfolios, which are separately managed exclusively for the benefit of Plan participants and their beneficiaries (separately managed portfolios). The separately managed portfolios are composed primarily of investments in publicly traded common and preferred stocks. The asset classes are designed to provide participants with choices among a variety of investment objectives.

*Payments of Benefits*

Subject to Plan limitations, upon termination of employment, including termination due to disability (as defined in the Plan) or retirement, a participant may elect to receive a full or partial distribution of his or her account balance in: (a) a single payment in cash; (b) a single distribution in full shares of Amgen stock (with any fractional shares paid in cash); (c) a single distribution paid in a combination of cash and full shares of Amgen stock; or (d) a rollover distribution to an eligible retirement plan.

Participants may also elect to maintain their account balance in the Plan subsequent to termination of employment, provided that their account balance is greater than \$1,000.

If a participant dies before receiving the value of his or her account balance, the participant's beneficiary may elect to receive the distribution of remaining funds from among the alternatives described above, subject to certain Plan limitations.

Certain restrictions apply to withdrawals from the Plan while a participant continues to be employed by the Company.

*Notes Receivable from Participants*

Subject to certain restrictions, a participant can have up to two loans outstanding at any one time from his or her Plan account with a combined maximum loan amount that may not exceed the lesser of: (a) 50% of the participant's account balance or (b) \$50,000 less certain adjustments, as applicable (as defined in the Plan). A participant's loan is secured by his or her Plan account balance. Loans made prior to January 1, 2006, bear interest at fixed rates based on the average borrowing rates of certain major banks. Loans made on or after January 1, 2006, bear interest at fixed rates which, until changed by the Company, are based on the prime rate plus one percentage point as published in The Wall Street Journal, determined as of the last day of the calendar quarter preceding origination or such other rate as may be required by law. Loans are generally payable in installments over periods ranging from one to five years, unless the loan is used to acquire a principal residence for which the term of the loan may be up to 20 years. Principal and interest payments are allocated to the participant's account.

*Plan Termination*

Although it has not expressed any intent to do so, the Company has the right under the Plan to terminate the Plan subject to the provisions of ERISA. Upon termination, participants would receive distributions of their account balances.

*Trustee*

Banco Popular de Puerto Rico is the Plan's trustee.

**The Retirement and Savings Plan for Amgen Manufacturing, Limited**  
**Notes to Financial Statements (continued)**

**2. Summary of Significant Accounting Policies**

*Basis of Accounting*

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

*Fair Value Measurement*

The investments of the Plan are reported at fair value. Fair value is generally defined as the price that would be received to sell an asset or paid to transfer a liability (the exit price) in an orderly transaction between market participants at the measurement date (see Note 3, *Fair Value Measurements*).

*Investment Income and Losses*

Dividend income is recognized on the ex-dividend date, and interest income is recorded on an accrual basis. Unrealized gains and losses on investments are measured by the change in the difference between the fair value and cost of the securities held at the beginning of the year (or date purchased if acquired during the Plan year) and the end of the year. Realized gains and losses from security transactions are recorded based on the weighted-average cost of securities sold.

*Notes Receivable from Participants*

Notes receivable from participants are carried at their unpaid balance plus accrued but unpaid interest, as applicable.

*Due from/to Brokers*

Purchases and sales of investments are recorded on a trade-date basis. Amounts due from and due to brokers arise from unsettled sale and purchase transactions.

*Use of Estimates*

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

*Recently issued accounting pronouncement*

In July 2018, the Financial Accounting Standards Board issued a new accounting standard that amends the fair value hierarchy disclosure to indicate that certain types of investments should not always be considered to be eligible to use the net asset value per unit as a practical expedient. Furthermore, this standard clarifies that an evaluation should be made of whether a readily determinable fair value exists for such investments or whether the investments qualify for measurement at the practical expedient. The Company is evaluating the new standard and currently anticipates that it will result in discontinuing the use of the practical expedient for determining the fair values of the Plan's investments in collective trust funds. Accordingly, the aggregate fair value of such investments would be moved from its current location as reconciling item of the fair value hierarchy table into this table with an assigned fair value measurement level. The new standard is effective for years beginning on January 1, 2019, and will be applied prospectively.

**The Retirement and Savings Plan for Amgen Manufacturing, Limited**  
**Notes to Financial Statements (continued)**

**3. Fair Value Measurements**

The Plan uses various valuation approaches in determining the fair value of investments within a hierarchy that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the investment based on market data obtained from independent sources. Unobservable inputs are inputs that reflect assumptions about the inputs that market participants would use in pricing the investment and are developed based on the best information available in the circumstances. The fair value hierarchy is divided into three levels based on the source of inputs as follows:

Level 1 – Valuations based on unadjusted quoted prices in active markets for identical investments that the Plan has the ability to access;

Level 2 – Valuations for which all significant inputs are observable, either directly or indirectly, other than Level 1 inputs;

Level 3 – Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The availability of observable inputs can vary among the various types of investments. To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, the inputs used for measuring fair value may fall into different levels of the fair value hierarchy. In such cases, for financial statement disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is categorized is based on the lowest level of input used that is significant to the overall fair value measurement.

The following fair value hierarchy tables present information about each major class/category of the Plan's investments measured at fair value:

<b>Fair value measurements at December 31, 2018, using</b>				
	<b>Quoted prices in active markets for identical assets (Level 1)</b>	<b>Significant other observable inputs (Level 2)</b>	<b>Significant unobservable inputs (Level 3)</b>	<b>Total</b>
Amgen stock	\$ 83,047,933	\$ —	\$ —	\$ 83,047,933
Cash and cash equivalents	—	—	—	—
Common and preferred stocks	68,895,253	—	—	68,895,253
Mutual funds	36,118,321	—	—	36,118,321
Self-directed brokerage accounts	2,145,935	—	—	2,145,935
Other	722	—	—	722
	<u>\$ 190,208,164</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 190,208,164</u>
Collective trust funds measured at net asset value				217,690,695
Total investments measured at fair value				<u>\$ 407,898,859</u>

**The Retirement and Savings Plan for Amgen Manufacturing, Limited**  
**Notes to Financial Statements (continued)**

Fair value measurements at December 31, 2017, using

	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Amgen stock	\$ 82,461,642	\$ —	\$ —	\$ 82,461,642
Cash and cash equivalents	320	—	—	320
Common and preferred stocks	81,566,175	79,015	—	81,645,190
Mutual funds	39,694,134	—	—	39,694,134
Self-directed brokerage accounts	2,416,707	—	—	2,416,707
Other	6,560	—	—	6,560
	<u>\$ 206,145,538</u>	<u>\$ 79,015</u>	<u>\$ —</u>	<u>\$ 206,224,553</u>
Collective trust funds measured at net asset value				235,221,554
Total investments measured at fair value				<u>\$ 441,446,107</u>

The fair values of common stocks (including Amgen stock), preferred stocks and mutual funds are valued using quoted market prices in active markets with no valuation adjustment.

Collective trust funds represent interests in pooled investment vehicles designed typically for collective investment of employee benefit trusts. The fair values of these investments are determined by reference to the net asset value per unit provided by the fund managers as a practical expedient. The unit values are based on the fair values of the trusts' underlying assets, which are principally equity and fixed income securities and short-term investments. The only redemption restriction with respect to these investments is on the Wells Fargo Stable Value Fund W (fair value of \$29,528,317 as of December 31, 2018), which requires a one-year notice to be given in the event of complete liquidation.

**4. Income Tax Status**

The Plan received an opinion letter from the Puerto Rico Treasury Department (PRTD) dated February 26, 2018, with an effective date of January 1, 2017, stating that the Plan meets the requirements of Section 1081.01 of the PR Code and the regulations thereunder, and, therefore the related trust forming part of the Plan is exempt from taxation. Subsequently, two amendments were made to the Plan, and the Plan received a letter from the PRTD dated October 30, 2018, stating the PRTD has no objection to these amendments. Subsequent to this letter, the Plan was amended again. Once qualified, the Plan is required to operate in conformity with the PR Code to maintain its qualification.

For taxable years 2018 and 2017, the Company believes the Plan satisfied, and operated in compliance with, the applicable requirements of the PR Code and therefore believes that the Plan, as amended, is qualified and the related trust is tax exempt. The Company has indicated that it currently intends to continue to take the necessary steps to maintain the Plan's compliance with the applicable requirements of the PR Code.

**5. Services Provided by the Company**

During 2018 and 2017, the Company paid certain trustee fees and other administrative costs on behalf of the Plan.

**The Retirement and Savings Plan for Amgen Manufacturing, Limited**  
**Notes to Financial Statements (continued)**

**6. Reconciliation of Financial Statements to Form 5500**

The reconciliation of net assets available for benefits per the financial statements to the Form 5500 consisted of the following:

	<b>December 31,</b>	
	<b>2018</b>	<b>2017</b>
Net assets available for benefits per the financial statements	\$ 421,791,601	\$ 458,373,633
Deemed loans	(481,033)	(421,752)
Net assets per the Form 5500	<u>\$ 421,310,568</u>	<u>\$ 457,951,881</u>

The following is a reconciliation of distributions per the financial statements to the Form 5500:

	<b>Year Ended December 31, 2018</b>
Benefits paid	\$ (58,529,331)
Investment and administrative fees	(591,365)
Total distributions per the financial statements	<u>(59,120,696)</u>
Deemed loan balance at December 31, 2017	421,752
Deemed loan balance at December 31, 2018	<u>(481,033)</u>
Total distributions per the Form 5500	<u>\$ (59,179,977)</u>

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

**Supplemental Schedule**  
**The Retirement and Savings Plan for Amgen Manufacturing, Limited**  
**EIN: 98-0210484 Plan: #001**  
**As of December 31, 2018**  
**Schedule H, line 4i – Schedule of Assets (Held at End of Year)**

Identity of Issue	Description of Investment	Current Value
Amgen Stock*	Employer Securities 426,609 shares	\$ 83,047,933
		\$ 83,047,933
Capital Preservation Asset Class:		
Wells Fargo Stable Value Fund*	Collective Trust Fund 529,175 units	29,528,317
NT Collective Short Term Investment Fund*	Collective Trust Fund 1,234,529 units	1,234,529
Total Capital Preservation Asset Class		30,762,846
Emerging Markets Equity Asset Class:		
Blackrock FTSE RAFI Emerging Index Non Lendable Fund F*	Collective Trust Fund 285,331 units	3,451,934
J.P. Morgan Emerging Markets Equity Focus Fund*	Collective Trust Fund 160,083 units	3,382,555
NT Collective Emerging Markets Fund / Non Lending*	Collective Trust Fund 3,462 units	570,485
Total Emerging Markets Equity Asset Class		7,404,974
Fixed Income Asset Class:		
JPMorgan Core Bond Fund*	Collective Trust Fund 618,944 units	11,605,195
Metropolitan West Total Return Bond Fund	Mutual Fund 1,182,379 units	11,563,670
Total Fixed Income Asset Class		23,168,865
Fixed Income Index Asset Class:		
NT Collective Aggregate Bond Index Fund / Non Lending*	Collective Trust Fund 59,424 units	8,347,893
Total Fixed Income Index Asset Class		8,347,893
High Yield Asset Class:		
Mackay Shields High Yield Bond CIT (Fund Code-2196)*	Collective Trust Fund 432,064 units	4,471,862
Blackrock Funds V High Yield Bond Portfolio Class K	Mutual Fund 612,268 units	4,371,595
NT Collective Aggregate Bond Index Fund / Non Lending*	Collective Trust Fund 15,505 units	2,178,192
Total High Yield Asset Class		11,021,649
Inflation Protection Asset Class:		
NT Collective Treasury Inflation/Protected Securities Index Fund / Non Lending*	Collective Trust Fund 41,380 units	5,781,565
Total Inflation Protection Asset Class		5,781,565
International Growth Asset Class:		
Artisan International Fund*	Collective Trust Fund 165,504 units	3,518,624

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

Identity of Issue	Description of Investment	Current Value
MFS Institutional International Equity Fund	Mutual Fund 154,982 units	3,470,053
NT Collective EAFE Index Fund / Non Lending*	Collective Trust Fund 1,480 units	417,926
Total International Growth Asset Class		7,406,603
International Index Asset Class:		
NT Collective All Country World Index Ex/US Fund / Non Lending*	Collective Trust Fund 156,510 units	21,445,039
Total International Index Asset Class		21,445,039
International Value Asset Class:		
Altrinsic International Equity Fund Class C*	Collective Trust Fund 387,347 units	4,213,328
Dodge & Cox International Fund	Mutual Fund 108,998 units	4,023,110
NT Collective EAFE Index Fund / Non Lending*	Collective Trust Fund 2,959 units	835,541
Total International Value Asset Class		9,071,979
Large Cap Growth Asset Class:		
NT Collective Russell 1000 Growth Index Fund / Non Lending*	Collective Trust Fund 5,755 units	2,335,062
Amazon Inc.	Common and Preferred Stock 1,182 shares	1,775,329
Visa Inc. Class A	Common and Preferred Stock 12,924 shares	1,705,193
salesforce.com, inc.	Common and Preferred Stock 8,315 shares	1,138,906
Alphabet Inc. Class A	Common and Preferred Stock 990 shares	1,034,510
NT Collective Short Term Investment Fund*	Collective Trust Fund 1,006,830 units	1,006,830
ServiceNow, Inc.	Common and Preferred Stock 5,315 shares	946,336
Microsoft Corporation	Common and Preferred Stock 8,976 shares	911,692
Netflix, Inc.	Common and Preferred Stock 3,064 shares	820,110
Regeneron Pharmaceuticals, Inc.	Common and Preferred Stock 1,952 shares	729,072
Alibaba Group Holding Limited	Common and Preferred Stock 5,250 shares	719,618
Abbott Lab	Common and Preferred Stock 8,453 shares	611,405
Nike, Inc. Class B	Common and Preferred Stock 7,905 shares	586,077
Yum! Brands Inc.	Common and Preferred Stock 6,370 shares	585,530
Alphabet Inc. Class C	Common and Preferred Stock 555 shares	574,764
FleetCor Technologies, Inc.	Common and Preferred Stock 3,076 shares	571,275
Facebook Inc. Class A	Common and Preferred Stock 4,322 shares	566,571
The Estee Lauder Companies Inc.	Common and Preferred Stock 4,305 shares	560,081
Adobe Systems Inc.	Common and Preferred Stock 2,470 shares	558,813
Booking Holdings Inc.	Common and Preferred Stock 310 shares	533,950
Ecolab Inc.	Common and Preferred Stock 3,489 shares	514,104
UnitedHealth Group Inc.	Common and Preferred Stock 2,029 shares	505,464
Walt Disney Company	Common and Preferred Stock 4,165 shares	456,692
Autodesk Inc.	Common and Preferred Stock 3,451 shares	443,833
Equinix Inc.	Common and Preferred Stock 1,216 shares	428,713
Becton Dickinson & Company	Common and Preferred Stock 1,823 shares	410,758
Edwards Lifesciences Corporation	Common and Preferred Stock 2,645 shares	405,135
illumina, Inc.	Common and Preferred Stock 1,350 shares	404,906
Novo Nordisk A/S	Common and Preferred Stock 8,669 shares	399,381

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

Identity of Issue	Description of Investment	Current Value
Linde PLC	Common and Preferred Stock 2,353 shares	367,162
Automatic Data Processing, Inc.	Common and Preferred Stock 2,796 shares	366,612
Intuit	Common and Preferred Stock 1,811 shares	356,495
Lowes Companies, Inc.	Common and Preferred Stock 3,839 shares	354,570
Monster Beverage Corporation	Common and Preferred Stock 7,005 shares	344,786
Apple Inc.	Common and Preferred Stock 2,170 shares	342,296
TJX Companies, Inc.	Common and Preferred Stock 7,622 shares	341,008
Ulta Salon, Cosmetics & Fragrance, Inc.	Common and Preferred Stock 1,385 shares	339,103
CoStar Group Inc.	Common and Preferred Stock 1,005 shares	339,027
Mondelez International, Inc.	Common and Preferred Stock 8,384 shares	335,612
Palo Alto Networks, Inc.	Common and Preferred Stock 1,580 shares	297,593
Intuitive Surgical, Inc.	Common and Preferred Stock 601 shares	287,831
Mastercard Inc. Class A	Common and Preferred Stock 1,402 shares	264,487
Splunk Inc.	Common and Preferred Stock 2,420 shares	253,737
Caterpillar Inc.	Common and Preferred Stock 1,882 shares	239,146
Alliance Data Systems Corporation	Common and Preferred Stock 1,593 shares	239,077
Align Technology, Inc.	Common and Preferred Stock 1,130 shares	236,656
Sarepta Therapeutics Inc.	Common and Preferred Stock 2,095 shares	228,627
Thermo Fisher Corporation	Common and Preferred Stock 1,017 shares	227,594
Cisco Systems, Inc.	Common and Preferred Stock 5,220 shares	226,183
Zebra Technologies Corporation	Common and Preferred Stock 1,410 shares	224,514
Abiomed Inc.	Common and Preferred Stock 675 shares	219,402
Match Group Inc.	Common and Preferred Stock 5,025 shares	214,919
Workday Inc. Class A	Common and Preferred Stock 1,330 shares	212,374
Coca Cola Company	Common and Preferred Stock 4,400 shares	208,340
Deere & Company	Common and Preferred Stock 1,361 shares	203,020
Boston Scientific Corporation	Common and Preferred Stock 5,650 shares	199,671
RingCentral, Inc. Class A	Common and Preferred Stock 2,360 shares	194,558
Biomarin Pharmaceutical Inc.	Common and Preferred Stock 2,245 shares	191,162
Twitter Inc.	Common and Preferred Stock 6,390 shares	183,649
Vertex Pharmaceuticals Inc.	Common and Preferred Stock 1,100 shares	182,281
Activision Blizzard Inc.	Common and Preferred Stock 3,795 shares	176,733
Eli Lilly and Company	Common and Preferred Stock 1,520 shares	175,894
CF Industries Holdings Inc.	Common and Preferred Stock 4,000 shares	174,040
Alexion Pharmaceuticals, Inc.	Common and Preferred Stock 1,770 shares	172,327
Xilinx Inc.	Common and Preferred Stock 1,970 shares	167,785
Target Corporation	Common and Preferred Stock 2,360 shares	155,972
Loxo Oncology Inc.	Common and Preferred Stock 1,102 shares	154,357
SBV Financial Group	Common and Preferred Stock 810 shares	153,835
Dexcom Inc.	Common and Preferred Stock 1,260 shares	150,948
Floor & Decor Holdings Inc.	Common and Preferred Stock 5,800 shares	150,220
Worldpay Inc. Class A	Common and Preferred Stock 1,940 shares	148,274
CSX Corporation	Common and Preferred Stock 2,340 shares	145,384
Grubhub Inc.	Common and Preferred Stock 1,890 shares	145,171
Qualcomm Inc.	Common and Preferred Stock 2,430 shares	138,291
Five Below, Inc.	Common and Preferred Stock 1,340 shares	137,109
Chipotle Mexican Grill, Inc.	Common and Preferred Stock 310 shares	133,855

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

Identity of Issue	Description of Investment	Current Value
Capital One Financial Corporation	Common and Preferred Stock 1,710 shares	129,259
Intel Corporation	Common and Preferred Stock 2,740 shares	128,588
Atlassian Corporation PLC Class A	Common and Preferred Stock 1,375 shares	122,348
Procter & Gamble NPV	Common and Preferred Stock 1,300 shares	119,496
Lululemon Athletica Inc.	Common and Preferred Stock 910 shares	110,665
Jacobs Engineering Group Inc.	Common and Preferred Stock 1,740 shares	101,720
WellCare Health Plans, Inc.	Common and Preferred Stock 400 shares	94,436
Diamondback Energy Inc.	Common and Preferred Stock 972 shares	90,104
Pioneer National Resources Company	Common and Preferred Stock 610 shares	80,227
Live Nation Entertainment Inc.	Common and Preferred Stock 1,220 shares	60,085
Tiffany & Company	Common and Preferred Stock 580 shares	46,696
<b>Total Large Cap Growth Asset Class:</b>		<b>34,025,421</b>
<b>Large Cap Index Asset Class:</b>		
NT Collective S&P 500 Index Fund – Non Lending*	Collective Trust Fund 9,849 units	86,206,754
NT Collective Short Term Investment Fund*	Collective Trust Fund 2,185 units	2,185
<b>Total Large Cap Index Asset Class</b>		<b>86,208,939</b>
<b>Large Cap Value Asset Class:</b>		
NT Collective Russell 1000 Value Index Fund / Non Lending*	Collective Trust Fund 1,621 units	537,066
NT Collective Short Term Investment Fund*	Collective Trust Fund 442,407 units	442,407
Alphabet Inc. Class C	Common and Preferred Stock 407 shares	421,493
Microsoft Corporation	Common and Preferred Stock 3,937 shares	399,881
Qorvo, Inc.	Common and Preferred Stock 5,863 shares	356,060
Hilton Worldwide Holdings Inc.	Common and Preferred Stock 4,874 shares	349,953
Skyworks Solutions Inc	Common and Preferred Stock 5,170 shares	346,493
National Oilwell Varco, Inc.	Common and Preferred Stock 12,892 shares	331,324
Mastercard Inc. Class A	Common and Preferred Stock 1,711 shares	322,780
KKR & Company Inc. Class A	Common and Preferred Stock 14,592 shares	286,441
Swiss Re AG	Common and Preferred Stock 2,980 shares	272,258
Comcast Corporation Class A	Common and Preferred Stock 7,700 shares	262,185
CVS Health Corporation	Common and Preferred Stock 3,985 shares	261,097
McKesson Corporation	Common and Preferred Stock 2,154 shares	237,952
European Aeronautic Defense and Space Company	Common and Preferred Stock 2,467 shares	237,942
United Parcel Service Inc. Class B	Common and Preferred Stock 2,434 shares	237,388
Visa Inc. Class A	Common and Preferred Stock 1,795 shares	236,832
Parker/Hannifin Corporation	Common and Preferred Stock 1,574 shares	234,746
Amazon Inc.	Common and Preferred Stock 155 shares	232,805
Teradyne, Inc.	Common and Preferred Stock 7,415 shares	232,683
Wells Fargo & Company*	Common and Preferred Stock 4,750 shares	218,880
Charter Communications, Inc. Class A	Common and Preferred Stock 692 shares	197,199
S&P Global Inc.	Common and Preferred Stock 1,131 shares	192,202
The Charles Schwab Corporation	Common and Preferred Stock 4,600 shares	191,038
Facebook Inc. Class A	Common and Preferred Stock 1,387 shares	181,822
State Street Corporation	Common and Preferred Stock 2,769 shares	174,641

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

Identity of Issue	Description of Investment	Current Value
Sanofi/Aventis	Common and Preferred Stock 3,900 shares	169,299
Oracle Corporation	Common and Preferred Stock 3,726 shares	168,229
Bank of America Corporation*	Common and Preferred Stock 6,700 shares	165,088
AmerisourceBergen Corp.	Common and Preferred Stock 2,203 shares	163,903
Novartis AG	Common and Preferred Stock 1,900 shares	163,039
Capital One Financial Corporation	Common and Preferred Stock 2,050 shares	154,960
Cigna Corporation	Common and Preferred Stock 811 shares	154,052
American Express Company	Common and Preferred Stock 1,600 shares	152,512
J.P. Morgan Chase & Company*	Common and Preferred Stock 1,550 shares	151,311
Bank of New York Mellon Corporation	Common and Preferred Stock 3,100 shares	145,917
Axis Capital Holdings Limited	Common and Preferred Stock 2,777 shares	143,404
FedEx Corporation	Common and Preferred Stock 850 shares	137,131
Twenty-First Century Fox, Inc. Class A	Common and Preferred Stock 2,750 shares	132,330
AstraZeneca PLC	Common and Preferred Stock 3,400 shares	129,132
Roche Holdings Ltd.	Common and Preferred Stock 4,100 shares	127,428
Bristol/Myers Squibb Company	Common and Preferred Stock 2,400 shares	124,752
Johnson Controls International PLC	Common and Preferred Stock 4,043 shares	119,875
GlaxoSmithKline PLC	Common and Preferred Stock 3,100 shares	118,451
MetLife, Inc.*	Common and Preferred Stock 2,850 shares	117,021
Anadarko Petroleum Corporation	Common and Preferred Stock 2,600 shares	113,984
Eli Lilly and Company	Common and Preferred Stock 950 shares	109,934
Everest Re Group Ltd	Common and Preferred Stock 490 shares	106,702
Hewlett Packard Enterprise Company	Common and Preferred Stock 8,000 shares	105,680
HP Inc.	Common and Preferred Stock 5,000 shares	102,300
The Goldman Sachs Group Inc.	Common and Preferred Stock 600 shares	100,230
Cisco Systems, Inc.	Common and Preferred Stock 2,200 shares	95,326
Booking Holdings Inc.	Common and Preferred Stock 55 shares	94,733
UnitedHealth Group Inc.	Common and Preferred Stock 375 shares	93,420
Occidental Petroleum Corporation	Common and Preferred Stock 1,500 shares	92,070
United Technologies Corporation	Common and Preferred Stock 800 shares	85,184
TE Connectivity Limited	Common and Preferred Stock 1,100 shares	83,193
Baker Hughes	Common and Preferred Stock 3,600 shares	77,400
Microchip Technology Inc.	Common and Preferred Stock 1,000 shares	71,920
Apache Corporation	Common and Preferred Stock 2,700 shares	70,875
Gilead Sciences Inc.	Common and Preferred Stock 1,000 shares	62,550
Juniper Networks, Inc.	Common and Preferred Stock 2,200 shares	59,202
Qurate Retail Inc.	Common and Preferred Stock 3,000 shares	58,560
Celanese Corporation	Common and Preferred Stock 650 shares	58,481
Schlumberger Limited	Common and Preferred Stock 1,500 shares	54,120
BB&T Corporation	Common and Preferred Stock 1,150 shares	49,818
Union Pacific Corporation	Common and Preferred Stock 325 shares	44,925
Micro Focus International PLC	Common and Preferred Stock 2,388 shares	41,097
Halliburton Company	Common and Preferred Stock 1,500 shares	39,870
Twenty-First Century Fox, Inc. Class B	Common and Preferred Stock 800 shares	38,224
Danaher Corporation	Common and Preferred Stock 350 shares	36,092
AT&T Inc.	Common and Preferred Stock 1,214 shares	34,648
Sprint Corporation	Common and Preferred Stock 5,724 shares	33,314

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

Identity of Issue	Description of Investment	Current Value
Zayo Group Holdings Inc.	Common and Preferred Stock 1,400 shares	31,976
Molson Coors Brewing Class B	Common and Preferred Stock 550 shares	30,888
Concho Resources Inc.	Common and Preferred Stock 300 shares	30,837
Dell Technologies Inc. Class C	Common and Preferred Stock 591 shares	28,875
Maxim Integrated Products, Inc.	Common and Preferred Stock 550 shares	27,968
Dish Network Corporation Class A	Common and Preferred Stock 1,100 shares	27,467
Medtronic PLC	Common and Preferred Stock 300 shares	27,288
Aegon N.V.*	Common and Preferred Stock 5,700 shares	26,505
Incyte Corporation	Common and Preferred Stock 400 shares	25,436
Brighthouse Financial Inc.	Common and Preferred Stock 677 shares	20,635
Mattel Inc.	Common and Preferred Stock 2,000 shares	19,980
Harley/Davidson	Common and Preferred Stock 550 shares	18,766
Ball Corporation	Common and Preferred Stock 400 shares	18,392
Alnylam Pharmaceuticals, Inc.	Common and Preferred Stock 250 shares	18,228
Gap Inc.	Common and Preferred Stock 700 shares	18,032
Alphabet Inc. Class A	Common and Preferred Stock 10 shares	10,450
News Corporation Class A	Common and Preferred Stock 700 shares	7,945
Weatherford International Ltd.	Common and Preferred Stock 2,000 shares	1,118
<b>Total Large Cap Value Asset Class</b>		<b>12,538,040</b>
<b>Participant Self-Directed Brokerage Accounts</b>	<b>Various Investments</b>	<b>2,145,935</b>
		<b>2,145,935</b>
<b>Real Estate Investment Trust (REIT) Asset Class:</b>		
Vanguard Specialized Portfolios REIT Index Fund Institutional Class	Mutual Fund 520,464 units	8,514,799
NT Collective Global Real Estate Index Fund - Non Lending*	Collective Trust Fund 4,695 units	899,046
<b>Total REIT Asset Class</b>		<b>9,413,845</b>
<b>Small-Mid Cap Growth Asset Class:</b>		
Wasatch Small Cap Growth Fund	Mutual Fund 130,025 units	4,175,094
NT Collective Russell 2000 Growth Index Fund / Non Lending*	Collective Trust Fund 2,793 units	868,963
Green Dot Corporation Stock	Common and Preferred Stock 1,931 shares	153,553
Zebra Technologies Corporation	Common and Preferred Stock 955 shares	152,065
Zendesk, Inc.	Common and Preferred Stock 2,350 shares	137,170
Molina Healthcare Inc.	Common and Preferred Stock 1,158 shares	134,583
Dexcom Inc.	Common and Preferred Stock 1,102 shares	132,020
IAC/InterActiveCorp	Common and Preferred Stock 662 shares	121,172
Five9 Inc.	Common and Preferred Stock 2,665 shares	116,514
RingCentral, Inc. Class A	Common and Preferred Stock 1,413 shares	116,488
NT Collective Short Term Investment Fund*	Collective Trust Fund 113,737 units	113,737
Chegg Inc.	Common and Preferred Stock 3,328 shares	94,582
Etsy Inc.	Common and Preferred Stock 1,901 shares	90,431
Lululemon Athletica Inc.	Common and Preferred Stock 717 shares	87,194
Ulta Salon, Cosmetics & Fragrance, Inc.	Common and Preferred Stock 352 shares	86,184
Wright Medical Group NV	Common and Preferred Stock 3,128 shares	85,144

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

Identity of Issue	Description of Investment	Current Value
CoStar Group Inc.	Common and Preferred Stock 246 shares	82,986
Abiomed Inc.	Common and Preferred Stock 244 shares	79,310
G-III Apparel Group Limited	Common and Preferred Stock 2,829 shares	78,901
Cree Inc.	Common and Preferred Stock 1,792 shares	76,653
Haemonetics Corporation	Common and Preferred Stock 766 shares	76,638
Keysight Technologies Inc.	Common and Preferred Stock 1,233 shares	76,545
Spirit Airlines, Inc.	Common and Preferred Stock 1,309 shares	75,817
Tandem Diabetes Care Inc.	Common and Preferred Stock 1,956 shares	74,269
Evolut Health Inc. Class A Class A	Common and Preferred Stock 3,690 shares	73,616
Grubhub Inc.	Common and Preferred Stock 858 shares	65,903
Irobot Corporation	Common and Preferred Stock 765 shares	64,061
Inter Parfums, Inc.	Common and Preferred Stock 933 shares	61,177
Array BioPharma Inc.	Common and Preferred Stock 4,245 shares	60,491
Q2 Holdings Inc.	Common and Preferred Stock 1,203 shares	59,609
Dolby Laboratories Inc. Class A	Common and Preferred Stock 962 shares	59,490
SBV Financial Group	Common and Preferred Stock 304 shares	57,736
PTC Inc.	Common and Preferred Stock 639 shares	52,973
Five Below, Inc.	Common and Preferred Stock 508 shares	51,979
Neurocrine Biosciences, Inc.	Common and Preferred Stock 705 shares	50,344
Advance Auto Parts Inc.	Common and Preferred Stock 309 shares	48,655
Teradyne, Inc.	Common and Preferred Stock 1,536 shares	48,200
Chart Industries Inc.	Common and Preferred Stock 710 shares	46,171
Insulet Corporation	Common and Preferred Stock 566 shares	44,895
Glu Mobile Inc.	Common and Preferred Stock 5,468 shares	44,127
Twilio Inc. Class A	Common and Preferred Stock 485 shares	43,311
Semtech Corporation	Common and Preferred Stock 919 shares	42,155
Alaska Air Group Inc.	Common and Preferred Stock 685 shares	41,682
Madison Square Garden Company Class A	Common and Preferred Stock 152 shares	40,690
TransUnion	Common and Preferred Stock 714 shares	40,555
Vail Resorts Inc.	Common and Preferred Stock 189 shares	39,845
Rapid7 Inc.	Common and Preferred Stock 1,278 shares	39,822
Urban Outfitters Inc.	Common and Preferred Stock 1,196 shares	39,707
Exact Sciences Corporation	Common and Preferred Stock 627 shares	39,564
Bio/Rad Laboratories, Inc. Class A	Common and Preferred Stock 165 shares	38,316
Tiffany & Company	Common and Preferred Stock 465 shares	37,437
Aerie Pharmaceuticals Inc.	Common and Preferred Stock 991 shares	35,775
Pure Storage Inc. Class A	Common and Preferred Stock 2,219 shares	35,682
Sage Therapeutics Inc.	Common and Preferred Stock 336 shares	32,185
Sarepta Therapeutics Inc.	Common and Preferred Stock 285 shares	31,102
Diamondback Energy Inc.	Common and Preferred Stock 330 shares	30,591
Burlington Stores Inc.	Common and Preferred Stock 187 shares	30,419
Callon Petroleum Company	Common and Preferred Stock 4,629 shares	30,042
BJs Restaurants Inc.	Common and Preferred Stock 590 shares	29,836
Advanced Micro Devices Inc.	Common and Preferred Stock 1,586 shares	29,278
Wex Inc.	Common and Preferred Stock 199 shares	27,872
Strategic Education Inc.	Common and Preferred Stock 236 shares	26,767
MSCI Inc. Common	Common and Preferred Stock 170 shares	25,063

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

Identity of Issue	Description of Investment	Current Value
Mongoddb Inc. Class A Class A	Common and Preferred Stock 282 shares	23,615
GoDaddy Inc. Class A	Common and Preferred Stock 358 shares	23,492
Madrigal Pharmaceuticals Inc.	Common and Preferred Stock 185 shares	20,853
Trupanion Inc.	Common and Preferred Stock 730 shares	18,586
Harsco Corporation	Common and Preferred Stock 911 shares	18,092
Intra/Cellular Therapies, Inc.	Common and Preferred Stock 1,311 shares	14,932
Malibu Boats Inc. Class A	Common and Preferred Stock 429 shares	14,929
Viking Therapeutics Inc.	Common and Preferred Stock 1,920 shares	14,688
Amedisys Inc.	Common and Preferred Stock 115 shares	13,468
<b>Total Small-Mid Cap Growth Asset Class</b>		<b>9,145,791</b>
Small-Mid Cap Index Asset Class:		
NT Collective Extended Equity Market Index Fund / Non Lending*	Collective Trust Fund 118,588 units	20,489,553
<b>Total Small-Mid Cap Index Asset Class</b>		<b>20,489,553</b>
Small-Mid Cap Value Asset Class:		
NT Collective Russell 2000 Value Index Fund / Non Lending*	Collective Trust Fund 10,739 units	2,900,061
NT Collective Short Term Investment Fund*	Collective Trust Fund 906,044 units	906,044
Popular, Inc.*	Common and Preferred Stock 10,980 shares	518,476
Citigroup Inc.	Common and Preferred Stock 12,380 shares	473,783
Tri Pointe Group Inc.	Common and Preferred Stock 40,665 shares	444,468
Whiting Petroleum Corporation	Common and Preferred Stock 15,625 shares	354,531
Ameris Bancorp	Common and Preferred Stock 10,375 shares	328,576
Hewlett Packard Enterprise Company	Common and Preferred Stock 24,600 shares	324,966
Citizens Financial Group, Inc.	Common and Preferred Stock 10,600 shares	315,138
First Horizon National Corporation	Common and Preferred Stock 23,749 shares	312,537
KBR Inc.	Common and Preferred Stock 20,410 shares	309,824
Axis Capital Holdings Limited	Common and Preferred Stock 5,585 shares	288,409
RenaissanceRe Holdings Limited	Common and Preferred Stock 2,020 shares	270,074
MellanoX Technologies Limited	Common and Preferred Stock 2,765 shares	255,431
Goodyear Tire & Rubber Company	Common and Preferred Stock 11,800 shares	240,838
Bemis Company Inc.	Common and Preferred Stock 5,056 shares	232,070
Western Alliance Bancorporation	Common and Preferred Stock 5,876 shares	232,043
Bio/Rad Laboratories, Inc. Class A	Common and Preferred Stock 975 shares	226,415
Discovery Communications, Inc. Series C	Common and Preferred Stock 9,800 shares	226,184
Kosmos Energy Limited	Common and Preferred Stock 54,400 shares	221,408
Taylor Morrison Home Corporation	Common and Preferred Stock 13,850 shares	220,215
The Bank of N.T. Butterfield & Son Limited	Common and Preferred Stock 7,000 shares	219,450
RPT Realty Shares Of Beneficial Interest	Common and Preferred Stock 18,155 units	216,952
The Geo Group, Inc.	Common and Preferred Stock 10,730 shares	211,381
Haverty Furniture Companies, Inc.	Common and Preferred Stock 11,175 shares	209,867
Avnet, Inc.	Common and Preferred Stock 5,800 shares	209,380
Reliance Steel & Aluminum Company	Common and Preferred Stock 2,935 shares	208,884
ARRIS International PLC	Common and Preferred Stock 6,800 shares	207,876
EnerSys	Common and Preferred Stock 2,655 shares	206,055

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

Identity of Issue	Description of Investment	Current Value
BorgWarner Inc.	Common and Preferred Stock 5,815 shares	202,013
Office Depot, Inc.	Common and Preferred Stock 76,800 shares	198,144
Allegheny Technologies Inc.	Common and Preferred Stock 9,080 shares	197,672
CNO Financial Group, Inc.	Common and Preferred Stock 13,190 shares	196,267
Cairn Energy PLC	Common and Preferred Stock 51,700 shares	193,875
Quanta Services Inc.	Common and Preferred Stock 6,270 shares	188,727
Carrizo Oil & Gas Inc.	Common and Preferred Stock 16,295 shares	183,971
EQT Corporation	Common and Preferred Stock 9,675 shares	182,761
ICF International, Inc.	Common and Preferred Stock 2,780 shares	180,088
Foot Locker Inc.	Common and Preferred Stock 3,385 shares	180,082
McDermott International Inc.	Common and Preferred Stock 26,900 shares	175,926
Embraer SA	Common and Preferred Stock 7,900 shares	174,827
Amerco	Common and Preferred Stock 530 shares	173,898
Superior Energy Services Inc.	Common and Preferred Stock 51,270 shares	171,755
Royal Mail PLC	Common and Preferred Stock 24,200 shares	166,012
Knight-Swift Transportation Holdings Inc.	Common and Preferred Stock 6,620 shares	165,963
Kemper Corporation	Common and Preferred Stock 2,480 shares	164,622
Innospec Inc.	Common and Preferred Stock 2,584 shares	159,588
Coherent, Inc.	Common and Preferred Stock 1,509 shares	159,516
Equitrans Midstream Corporation NPV Wi	Common and Preferred Stock 7,932 shares	158,799
PH Glatfelter Company	Common and Preferred Stock 15,985 shares	156,014
Acacia Communications Inc.	Common and Preferred Stock 4,100 shares	155,800
Navistar International Corporation	Common and Preferred Stock 6,000 shares	155,700
C&J Energy Services Inc.	Common and Preferred Stock 11,000 shares	148,500
Generac Holdings Inc.	Common and Preferred Stock 2,980 shares	148,106
United Financial Bancorp Inc.	Common and Preferred Stock 10,060 shares	147,882
Getty Realty Corporation	Common and Preferred Stock 4,940 units	145,285
Jacobs Engineering Group Inc.	Common and Preferred Stock 2,405 shares	140,596
Neophotonics Corporation	Common and Preferred Stock 21,300 shares	138,024
Albany International Corporation Class A	Common and Preferred Stock 2,200 shares	137,346
ViaSat, Inc.	Common and Preferred Stock 2,320 shares	136,764
Synchrony Financial	Common and Preferred Stock 5,800 shares	136,068
Reinsurance Group of America, Inc.	Common and Preferred Stock 955 shares	133,920
Great Lakes Dredge & Dock Corporation	Common and Preferred Stock 20,160 shares	133,459
Mammoth Energy Services Inc.	Common and Preferred Stock 7,380 shares	132,692
Tutor Perini Corporation	Common and Preferred Stock 8,290 shares	132,391
Banner Corporation	Common and Preferred Stock 2,460 shares	131,561
Gulfport Energy Corporation	Common and Preferred Stock 20,080 shares	131,524
MGIC Investment Corporation	Common and Preferred Stock 12,570 shares	131,482
PPDC Energy Inc.	Common and Preferred Stock 4,390 shares	130,646
AXA Equitable Holdings Inc.	Common and Preferred Stock 7,800 shares	129,714
HomeStreet Inc.	Common and Preferred Stock 6,100 shares	129,503
Ophir Energy Company	Common and Preferred Stock 141,200 shares	128,393
Bunge Limited	Common and Preferred Stock 2,400 shares	128,256
Magna International Inc.	Common and Preferred Stock 2,800 shares	127,260
Netscout Systems Inc.	Common and Preferred Stock 5,310 shares	125,475
Teradyne, Inc.	Common and Preferred Stock 3,995 shares	125,363

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

Identity of Issue	Description of Investment	Current Value
LivaNova PLC	Common and Preferred Stock 1,365 shares	124,857
Brandywine Realty Trust	Common and Preferred Stock 9,701 units	124,852
Astronics Corporation	Common and Preferred Stock 4,100 shares	124,845
Carpenter Technology Corporation	Common and Preferred Stock 3,500 shares	124,635
BMC Stock Holdings Inc.	Common and Preferred Stock 7,835 shares	121,286
Texas Capital Bancshares, Inc.	Common and Preferred Stock 2,370 shares	121,083
Cummins Inc.	Common and Preferred Stock 905 shares	120,944
Fulton Financial Corporation	Common and Preferred Stock 7,430 shares	115,016
PPL Corporation ISIN US69351T1060	Common and Preferred Stock 3,900 shares	110,487
Ally Financial Inc.	Common and Preferred Stock 4,700 shares	106,502
Ardmore Shipping Corporation	Common and Preferred Stock 22,660 shares	105,822
Smart Global Holdings Inc. Common Stock	Common and Preferred Stock 3,550 shares	105,435
Spirit Airlines, Inc.	Common and Preferred Stock 1,820 shares	105,414
Cypress Semiconductor Corporation	Common and Preferred Stock 8,215 shares	104,495
Apogee Enterprises, Inc.	Common and Preferred Stock 3,460 shares	103,281
Central Pacific Financial Corporation	Common and Preferred Stock 4,200 shares	102,270
Haynes International Inc.	Common and Preferred Stock 3,760 shares	99,264
Microstrategy Inc. Class A	Common and Preferred Stock 770 shares	98,368
High Point Resources Corporation	Common and Preferred Stock 39,250 shares	97,733
LGI Homes Inc.	Common and Preferred Stock 2,150 shares	97,223
Apache Corporation	Common and Preferred Stock 3,700 shares	97,125
Bed Bath & Beyond Inc.	Common and Preferred Stock 8,400 shares	95,088
Century Communities, Inc.	Common and Preferred Stock 5,470 shares	94,412
Discover Financial Services	Common and Preferred Stock 1,600 shares	94,368
National Bank Holdings Corporation Class A	Common and Preferred Stock 3,000 shares	92,610
Pacwest Bancorp Company	Common and Preferred Stock 2,770 shares	92,186
Schweitzer-Mauduit International Inc.	Common and Preferred Stock 3,560 shares	89,178
Mallinckrodt PLC	Common and Preferred Stock 5,600 shares	88,480
First Foundation Inc.	Common and Preferred Stock 6,820 shares	87,705
Euronet Worldwide, Inc.	Common and Preferred Stock 850 shares	87,023
Essent Group Limited	Common and Preferred Stock 2,520 shares	86,134
Northfield Bancorp Inc.	Common and Preferred Stock 6,320 shares	85,636
Corning Inc.	Common and Preferred Stock 2,800 shares	84,588
FreightCar America, Inc.	Common and Preferred Stock 12,630 shares	84,495
Commscope Holding Company Inc.	Common and Preferred Stock 5,100 shares	83,589
Tower International Inc.	Common and Preferred Stock 3,500 shares	83,300
News Corporation Class A	Common and Preferred Stock 7,300 shares	82,855
Brixmor Property Group Inc.	Common and Preferred Stock 5,640 shares	82,852
Snap-On Incorporated	Common and Preferred Stock 555 shares	80,636
Orion Marine Group, Inc.	Common and Preferred Stock 18,480 shares	79,279
Ladder Capital Corporation	Common and Preferred Stock 5,080 shares	78,588
Peapack/Gladstone Financial Corporation	Common and Preferred Stock 3,110 shares	78,310
ManpowerGroup Inc.	Common and Preferred Stock 1,200 shares	77,760
Commvault Systems Inc.	Common and Preferred Stock 1,310 shares	77,408
Extreme Networks Inc.	Common and Preferred Stock 12,630 shares	77,043
Del Taco Restaurants Inc.	Common and Preferred Stock 7,690 shares	76,823
Piedmont Office Realty Tru-A	Common and Preferred Stock 4,480 shares	76,339

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

Identity of Issue	Description of Investment	Current Value
Qorvo, Inc.	Common and Preferred Stock 1,255 shares	76,216
Granite Construction Inc.	Common and Preferred Stock 1,880 shares	75,726
Scorpio Tankers Inc.	Common and Preferred Stock 41,560 shares	73,146
Equity Commonwealth	Common and Preferred Stock 2,430 shares	72,924
Murphy Oil Corporation	Common and Preferred Stock 3,000 shares	70,170
Ericsson Inc.	Common and Preferred Stock 7,800 shares	69,186
Kennedy/Wilson Holdings, Inc.	Common and Preferred Stock 3,750 shares	68,138
The Hanover Insurance Group, Inc.	Common and Preferred Stock 580 shares	67,727
Parsley Energy Inc. Class A	Common and Preferred Stock 4,205 shares	67,196
Solaris Oilfield Infrastructure Inc. Class Acl A	Common and Preferred Stock 5,540 shares	66,979
Air Transport Services Group Inc.	Common and Preferred Stock 2,930 shares	66,833
Adient PLC	Common and Preferred Stock 4,400 shares	66,264
Tile Shop Holdings Inc.	Common and Preferred Stock 12,060 shares	66,089
Hibbett Sports Inc.	Common and Preferred Stock 4,600 shares	65,780
Nexpoint Residential Trust Inc.	Common and Preferred Stock 1,840 shares	64,492
Portland General Electric Company	Common and Preferred Stock 1,390 shares	63,732
Investors Real Estate Trust Shares Of Beneficial Interest (Post Rev Split)	Common and Preferred Stock 1,292 shares	63,398
Industrial Logistics Properties Treasury Shares Beneficial Interest Shares	Common and Preferred Stock 3,170 shares	62,354
Enstar Group Ltd.	Common and Preferred Stock 370 shares	62,001
United Community Bank Blairsville Georgia	Common and Preferred Stock 2,880 shares	61,805
Origin Bancorp Inc.	Common and Preferred Stock 1,800 shares	61,344
Santander Consumer USA Holdings, Inc.	Common and Preferred Stock 3,400 shares	59,806
UMH Properties Inc.	Common and Preferred Stock 5,000 shares	59,200
Covanta Holding Corporation	Common and Preferred Stock 4,380 shares	58,780
YRC Worldwide Inc.	Common and Preferred Stock 18,560 shares	58,464
State Bank Financial Corporation	Common and Preferred Stock 2,640 shares	56,998
Sallie Mae Corporation	Common and Preferred Stock 6,800 shares	56,508
Fifth Third Bancorp	Common and Preferred Stock 2,400 shares	56,472
Colony Capital Inc. Class A	Common and Preferred Stock 12,000 shares	56,160
Avis Budget Group Inc.	Common and Preferred Stock 2,400 shares	53,952
QAD Inc. Class A	Common and Preferred Stock 1,360 shares	53,489
Mesa Air Group Inc.	Common and Preferred Stock 6,840 shares	52,736
ALLETE Inc.	Common and Preferred Stock 690 shares	52,592
Ooma Inc.	Common and Preferred Stock 3,780 shares	52,466
Stealthgas Inc.	Common and Preferred Stock 18,700 shares	51,612
Lattice Semiconductor Company	Common and Preferred Stock 7,305 shares	50,551
PNM Resources, Inc.	Common and Preferred Stock 1,230 shares	50,541
NorthWestern Corporation	Common and Preferred Stock 850 shares	50,524
Boise Cascade Company	Common and Preferred Stock 2,100 shares	50,085
Libbey, Inc.	Common and Preferred Stock 11,860 shares	46,017
Allison Transmission Holdings, Inc.	Common and Preferred Stock 1,000 shares	43,910
CBS Corporation Class B	Common and Preferred Stock 1,000 shares	43,720
Teradata Corporation	Common and Preferred Stock 1,100 shares	42,196
Kearny Financial Corporation	Common and Preferred Stock 3,290 shares	42,178
Zimmer Biomet Holdings Inc	Common and Preferred Stock 400 shares	41,488

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

Identity of Issue	Description of Investment	Current Value
Materion Corporation	Common and Preferred Stock 895 shares	40,266
Accuray Inc.	Common and Preferred Stock 11,670 shares	39,795
NRG Energy, Inc.	Common and Preferred Stock 1,000 shares	39,600
e.l.f. Beauty Inc.	Common and Preferred Stock 4,530 shares	39,230
Tailored Brands Inc.	Common and Preferred Stock 2,830 shares	38,601
State Street Corporation	Common and Preferred Stock 600 shares	37,842
Alleghany Corporation	Common and Preferred Stock 60 shares	37,399
Interpublic Group Companies Inc.	Common and Preferred Stock 1,800 shares	37,134
NN Inc.	Common and Preferred Stock 5,290 shares	35,496
Eclipse Resources Corporation	Common and Preferred Stock 32,610 shares	34,241
Franks International NV	Common and Preferred Stock 6,100 shares	31,842
El Paso Electric Company	Common and Preferred Stock 630 shares	31,582
MDC Partners Inc. Class A	Common and Preferred Stock 11,540 shares	30,119
Aerohive Networks Inc.	Common and Preferred Stock 9,120 shares	29,731
Tetra Tech, Inc.	Common and Preferred Stock 17,050 shares	28,644
Ribbon Communications Inc.	Common and Preferred Stock 5,660 shares	27,281
KEYW Holding Corporation	Common and Preferred Stock 4,000 shares	26,760
Trinity Biotech PLC	Common and Preferred Stock 10,640 shares	24,366
Marathon Oil Corporation	Common and Preferred Stock 1,500 shares	21,510
Potlatchdeltic Corporation	Common and Preferred Stock 580 shares	18,351
Onespan Inc.	Common and Preferred Stock 1,360 shares	17,612
Delek US Holdings Inc.	Common and Preferred Stock 520 shares	16,905
Hess Corporation LLC	Common and Preferred Stock 400 shares	16,200
Ferroglobe PLC	Common and Preferred Stock 10,100 shares	16,059
Servicesource International	Common and Preferred Stock 14,740 shares	15,919
Resolute Energy Corporation	Common and Preferred Stock 540 shares	15,649
Tetra Tech, Inc.	Warrant 6,560 shares	722
Total Small-Mid Cap Value Asset Class		26,471,989
Notes Receivable From Participants*	Interest Rate 4.25% - 9.25%	13,559,277
		13,559,277
Grand Total		\$ 421,458,136

\* Indicates party-in-interest

**THE RETIREMENT AND SAVINGS PLAN FOR  
AMGEN MANUFACTURING, LIMITED**

**INDEX TO EXHIBIT**

[Consent of Independent Registered Public Accounting Firm](#)

Exhibit 23.1

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

The Retirement and Savings Plan for  
Amgen Manufacturing, Limited  
(Name of Plan)

Date: June 17, 2019

By: /s/ DAVID W. MELINE  
David W. Meline  
Deputy Chairman and Chief Financial Officer  
Amgen Manufacturing, Limited

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in the Registration Statements (Form S-8 Nos. 33-47605, 333-144580 and 333-216715) pertaining to The Retirement and Savings Plan for Amgen Manufacturing, Limited of Amgen Inc. of our report dated June 17, 2019, with respect to the financial statements and schedule of The Retirement and Savings Plan for Amgen Manufacturing, Limited included in this Annual Report (Form 11-K) for the year ended December 31, 2018.

/s/ ERNST & YOUNG LLP

Los Angeles, California

June 17, 2019