| Voya Emerging | Markets | High | Dividend | Equity | Fund |
|------------------|---------|------|----------|--------|------|
| Form N-Q | | | | | |
| January 22, 2016 | 5 | | | | |

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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM N-Q

QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT COMPANY

Investment Company Act file number: 811-22438

Voya Emerging Markets High Dividend Equity Fund

(Exact name of registrant as specified in charter)

7337 East Doubletree Ranch Rd., Suite 100, Scottsdale, AZ 85258

(Address of principal executive offices) (Zip code)

Huey P. Falgout, Jr., 7337 East Doubletree Ranch Road, Suite 100, Scottsdale, AZ 85258

(Name and address of agent for service)

Registrant's telephone number, including area code: 1-800-992-0180

Date of fiscal year end: February 28

Date of reporting period: November 30, 2015

| Item 1. Schedule of Investments | |
|---|--|
| The schedules of investments as of the close of the reporting period are set forth below for: | |
| Voya Emerging Markets High Dividend Equity Fund | |

The schedules are not audited.

Voya Emerging Markets High Dividend Equity Fund

as of November 30, 2015 (Unaudited)

| Shares | | Value | Percentage of Net Assets |
|------------|---|-------------|--------------------------|
| COMMON ST | TOCK: 91.1% | | |
| | Brazil: 3.8% | | |
| 547,825 | BM&FBovespa SA - Bolsa de Valores Mercadorias e Futuros | \$1,609,917 | 0.9 |
| | Cia Energetica de Minas Gerais ADR | 736,517 | 0.4 |
| 246,194 | Cia Hering | 960,214 | 0.6 |
| 431,596 | Duratex SA | 747,401 | 0.4 |
| 133,585 | Totvs S.A. | 1,155,619 | 0.7 |
| 164,745 | Tractebel Energia S.A. | 1,424,753 | 0.8 |
| | | 6,634,421 | 3.8 |
| | Chile: 2.8% | | |
| 129,578 @ | Banco Santander Chile ADR | 2,342,770 | 1.3 |
| 10,431,463 | Enersis SA | 2,540,601 | 1.5 |
| , , | | 4,883,371 | 2.8 |
| | | | |
| | China: 27.8% | | |
| 378,000 | Beijing Enterprises Holdings Ltd. | 2,361,395 | 1.4 |
| 578,000 | BOC Hong Kong Holdings Ltd. | 1,771,591 | 1.0 |
| 2,776,000 | China BlueChemical Ltd. | 754,122 | 0.4 |
| 5,510,000 | China Communications Services Corp., Ltd. | 2,122,277 | 1.2 |
| 6,240,000 | China Construction Bank | 4,298,210 | 2.5 |
| 909,000 | China Life Insurance Co., Ltd. | 3,140,950 | 1.8 |
| 688,000 | China Overseas Land & Investment Ltd. | 2,278,632 | 1.3 |
| 3,671,200 | China Petroleum & Chemical Corp. | 2,270,011 | 1.3 |
| 3,334,000 | China Resources Cement Holdings Ltd. | 1,084,745 | 0.6 |
| 1,056,000 | China Resources Land Ltd. | 2,848,029 | 1.6 |
| 890,000 | China Resources Power Holdings Co. | 1,673,690 | 1.0 |
| 481,000 | China Shineway Pharmaceutical Group Ltd. | 625,450 | 0.4 |
| 1,788,000 | China Unicom Hong Kong Ltd. | 2,219,731 | 1.3 |
| 1,160,000 | COSCO Pacific Ltd. | 1,427,861 | 0.8 |
| 5,990,000 | Datang International Power Generation Co., Ltd. | 1,927,312 | 1.1 |
| 1,582,000 | Harbin Electric Co. Ltd. | 792,684 | 0.5 |
| 216,000 | Hengan International Group Co., Ltd. | 2,178,628 | 1.3 |
| 7,569,768 | Industrial & Commercial Bank of China | 4,585,877 | 2.6 |
| 1,120,000 | Jiangsu Expressway Co. Ltd. | 1,455,188 | 0.8 |
| 4,704,500 | Parkson Retail Group Ltd. | 604,365 | 0.3 |
| 2,618,000 | PetroChina Co., Ltd. | 1,854,991 | 1.1 |
| 878,000 | Shanghai Industrial Holdings Ltd. | 2,295,003 | 1.3 |
| Shares | Value | | |

| | | | Percentage of Net Assets |
|--|--|---|---------------------------------|
| COMMON ST | OCK: (continued) | | |
| 943,200 1,437,000 | China: (continued) Shanghai Pharmaceuticals Holding Co. Ltd. Zhejiang Expressway Co., Ltd. | \$2,068,758 1,747,058 48,386,558 | 1.2 1.0 27.8 |
| 10,350 | Czech Republic: 1.2% Komercni Banka AS | 2,101,102 | 1.2 |
| 245,707 @ | Egypt: 0.2% Global Telecom Holding GDR | 276,420 | 0.2 |
| 467,228 34,950,000 879,000 | Hong Kong: 3.3% AIA Group Ltd. Emperor Watch & Jewellery Ltd. Hang Lung Properties Ltd. | 2,789,733 891,514 2,060,134 5,741,381 | 1.6 0.5 1.2 3.3 |
| 277,118 | India: 6.9% GAIL India Ltd. | 1,520,720 | 0.9 |
| 445,757 1,299,495 | ICICI Bank Ltd. ADR ITC Ltd. NTPC Ltd. | 1,341,766 2,289,714 2,555,497 | 0.8 1.3 1.5 |
| 514,040 166,325 207,368 | Punjab National Bank Reliance Industries Ltd. Tata Steel Ltd. | 1,117,473 2,411,412 715,076 | 0.6 1.4 0.4 |
| 5 222 200 | Indonesia: 1.1% | 11,951,658 | 6.9 |
| 5,333,300 | Indofood Sukses Makmur Tbk PT Macau: 0.9% | 1,875,821 | 1.1 |
| 486,400 | Sands China Ltd. | 1,638,683 | 0.9 |
| 868,300 1,291,077 3,147,000 1,135,800 | Malaysia: 3.4% AirAsia BHD Berjaya Sports Toto BHD IJM Corp. Bhd Malayan Banking BHD | 276,409 935,607 2,513,632 2,216,160 5,941,808 | 0.2 0.5 1.4 1.3 3.4 |
| 1,268,689 571,749 | Mexico: 2.2% Grupo Financiero Santander Mexico SAB de CV Kimberly-Clark de Mexico SA de CV | 2,471,832 1,351,236 3,823,068 | 1.4 0.8 2.2 |
| 13,552 @ | Panama: 0.4% Copa Holdings S.A. | 699,961 | 0.4 |

Poland: 2.0%

95,676 PKP Cargo SA 1,525,810 0.9

Voya Emerging Markets High Dividend Equity Fund

as of November 30, 2015 (Unaudited) (Continued)

| Shares | | Value | Percentage of Net Assets |
|-----------|--|--------------------------|--------------------------------|
| COMMON S | TOCK: (continued) | | |
| 213,840 | Poland: (continued) Powszechny Zaklad Ubezpieczen SA | \$2,043,084 3,568,894 | 1.1 2.0 |
| | Russia: 3.7% | | |
| 396,111 @ | Gazprom PAO ADR | 1,632,175 | 0.9 |
| 37,809 | Lukoil OAO | 1,442,527 | 0.8 |
| | Lukoil PJSC ADR | 267,769 | 0.2 |
| , | Mobile TeleSystems PJSC ADR | 1,748,231 | 1.0 |
| 133,571 | Severstal PAO | 1,417,907 | 0.8 |
| | | 6,508,609 | 3.7 |
| | Singapage 1 207 | | |
| 1,596,000 | Singapore: 1.3% First Resources Ltd. | 2,248,021 | 1.3 |
| | South Africa: 5.1% | | |
| 92,331 | Barclays Africa Group Ltd. | 1,013,477 | 0.6 |
| 783,290 | Growthpoint Properties Ltd. | 1,305,777 | 0.0 |
| 193,063 | MTN Group Ltd. | 1,931,538 | 1.1 |
| 1,027,619 | PPC Ltd. | 1,189,263 | 0.7 |
| 178,875 | Shoprite Holdings Ltd. | 1,754,817 | 1.0 |
| 196,879 | Standard Bank Group Ltd. | 1,765,566 | 1.0 |
| , | 1 | 8,960,438 | 5.1 |
| | South Korea: 12.7% | | |
| 72,124 | Hite Jinro Co. Ltd. | 1,503,066 | 0.9 |
| 80,793 | Hyundai Marine & Fire Insurance Co., Ltd. | 2,363,633 | 1.3 |
| 9,049 | Hyundai Motor Co. | 1,150,704 | 0.7 |
| 83,120 | KB Financial Group, Inc. | 2,528,530 | 1.4 |
| 105,243 | KT Corp. | 2,737,049 | 1.6 |
| 85,525 | LG Display Co., Ltd. | 1,883,993 | 1.1 |
| 7,344 | POSCO | 1,073,722 | 0.6 |
| 4,269 | Samsung Electronics Co., Ltd. | 4,725,539 | 2.7 |
| 72,070 | Shinhan Financial Group Co., Ltd. | 2,587,554 | 1.5 |
| 14,071 | SK Innovation Co. Ltd. | 1,546,958 | 0.9 |
| | | 22,100,748 | 12.7 |

Taiwan: 10.7%

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| 1,617,000 695,959 4,998,945 58,583 139,000 805,700 950,000 366,000 1,290,000 Shares | Cathay Financial Holding Co., Ltd. Cheng Uei Precision Industry Co., Ltd. CTBC Financial Holding Co. Ltd. MediaTek, Inc. Phison Electronics Corp. Powertech Technology, Inc. Quanta Computer, Inc. Radiant Opto-Electronics Corp. Taiwan Semiconductor Manufacturing Co., I | 2,261,721 905,396 2,617,847 466,849 1,059,083 1,738,719 1,484,248 955,316 atd. 5,520,048 Value | 1.3 0.5 1.5 0.3 0.6 1.0 0.9 0.5 3.2 Percentage of Net |
|--|---|---|---|
| COMMON | CTOCK (continued) | | Assets |
| COMMON | STOCK: (continued) Taiwan: (continued) | | |
| 570,000 | TPK Holding Co. Ltd. | \$1,616,290 18,625,517 | 0.9 10.7 |
| 86,000 | Thailand: 0.4% PTT PCL | 613,377 | 0.4 |
| 1,857,183 | Turkey: 1.0% Emlak Konut Gayrimenkul Yatirim Ortakligi A | AS 1,767,749 | 1.0 |
| 69,938 | United Kingdom: 0.2% Anglo American PLC | 424,620 | 0.2 |
| | Total Common Stock (Cost \$206,561,559) | 158,772,225 | 91.1 |
| PREFERRE | ED STOCK: 5.6% | | |
| | Brazil: 2.8% | 402 =04 | |
| 312,502 | Gerdau SA | 492,701 | 0.3 |
| 121,595 | Itau Unibanco Holding S.A. | 873,385 745,892 | 0.5 |
| 1,072,809 215,907 | Randon SA Implementos e Participacoes Telefonica Brasil SA | 2,064,761 | 0.4 1.2 |
| 281,672 | Vale SA | 773,888 | 0.4 |
| 201,072 | vale 3A | 4,950,627 | 2.8 |
| | South Warran 2 900 | | |
| 17 267 | South Korea: 2.8% | 1 670 260 | 1.0 |
| 17,367 | Hyundai Motor Co Series 2 Samsung Electronics Co., Ltd. | 1,670,368 3,206,986 | 1.0 1.8 |
| 3,392 | Sanisung Electronics Co., Ltd. | 4,877,354 | 2.8 |
| - | D . I D . G I G I | | |
| | Total Preferred Stock (Cost \$17,485,515) | 9,827,981 | 5.6 |
| Principal A | mount† Value | Percentage of Net Assets | |

CORPORATE BONDS/NOTES: 0.2%

| ^{INR} 16,243,688 | India: 0.2% NTPC Ltd., 8.490%, 03/25/25 | 261,353 | 0.2 |
|---------------------------|--|-------------|------|
| | Total Corporate Bonds/Notes (Cost \$260,086) | 261,353 | 0.2 |
| | Total Long-Term Investments (Cost \$224,307,160) | 168,861,559 | 96.9 |

Voya Emerging Markets High Dividend Equity Fund

as of November 30, 2015 (Unaudited) (Continued)

| Shares | | Value | Percentage of Net Assets |
|-----------|--|---------------|--------------------------------|
| SHORT-T | ERM INVESTMENTS: 1.7% | | |
| | Mutual Funds: 1.7% | | |
| 2,908,719 | BlackRock Liquidity Funds, TempFund, Institutional Class, 0.130% | ·† | |
| | (Cost \$2,908,719) | \$2,908,719 | 1.7 |
| ı | Total Short-Term Investments | | |
| | (Cost \$2,908,719) | 2,908,719 | 1.7 |
| | Tatal Lauranton and in Consolition | | |
| | Total Investments in Securities (Cost \$227,215,879) | \$171,770,278 | 98.6 |
| | Assets in Excess of Other Liabilities | 2,428,247 | 1.4 |
| | Net Assets | \$174,198,525 | 100.0 |
| | INCL ASSCIS | \$174,190,323 | 100.0 |

- † Unless otherwise indicated, principal amount is shown in USD.
- †† Rate shown is the 7-day yield as of November 30, 2015.
- @ Non-income producing security.

ADR American Depositary Receipt

GDR Global Depositary Receipt

INR Indian Rupee

Cost for federal income tax purposes is \$229,516,170.

Net unrealized depreciation consists of:

Gross Unrealized Appreciation \$5,507,984 Gross Unrealized Depreciation (63,253,876)

Net Unrealized Depreciation \$(57,745,892)

Sector Diversification

Percentage of Net Assets

Financials 33.0 %

| Information Technology | 14.2 | |
|---------------------------------------|-------|---|
| Industrials | 9.1 | |
| Consumer Staples | 7.7 | |
| Telecommunication Services | 7.6 | |
| Utilities | 7.4 | |
| Energy | 7.0 | |
| Materials | 4.8 | |
| Consumer Discretionary | 4.5 | |
| Health Care | 1.6 | |
| Short-Term Investments | 1.7 | |
| Assets in Excess of Other Liabilities | 1.4 | |
| Net Assets | 100.0 | % |

Fair Value Measurements

The following is a summary of the fair valuations according to the inputs used as of November 30, 2015 in valuing the assets and liabilities:⁽¹⁾

| | Quoted Prices in Active Markets for Identical Investments (Level 1) | Signification Other Observation Inputs: (Level | vable # | Signific Unobse Inputs (Level | ervable | Fair Value at November 30, 2015 |
|----------------------------|---|--|------------|--|---------|--|
| Asset Table | | | | | | |
| Investments, at fair value | | | | | | |
| Common Stock | | | | | | |
| Brazil | \$ 6,634,421 | \$ | _ | \$ | _ | \$ 6,634,421 |
| Chile | 4,883,371 | | _ | | _ | 4,883,371 |

Voya Emerging Markets High Dividend Equity Fund

as of November 30, 2015 (Unaudited) (Continued)

| | Quoted Prices in Active Markets for Identical Investments (Level 1) | Significant Other Observable Inputs# (Level 2) | Significant Unobservable Inputs (Level 3) | Fair Value at November 30, 2015 |
|----------------------------------|---|--|--|--|
| China | \$ - | \$46,958,697 | \$ 1,427,861 | \$48,386,558 |
| Czech Republic | · — | 2,101,102 | _ | 2,101,102 |
| Egypt | 276,420 | _ | _ | 276,420 |
| Hong Kong | _ | 5,741,381 | _ | 5,741,381 |
| India | 1,341,766 | 10,609,892 | _ | 11,951,658 |
| Indonesia | _ | 1,875,821 | _ | 1,875,821 |
| Macau | _ | 1,638,683 | _ | 1,638,683 |
| Malaysia | 935,607 | 5,006,201 | _ | 5,941,808 |
| Mexico | 3,823,068 | _ | _ | 3,823,068 |
| Panama | 699,961 | _ | _ | 699,961 |
| Poland | _ | 3,568,894 | _ | 3,568,894 |
| Russia | 3,648,175 | 2,860,434 | _ | 6,508,609 |
| Singapore | _ | 2,248,021 | _ | 2,248,021 |
| South Africa | _ | 8,960,438 | _ | 8,960,438 |
| South Korea | _ | 22,100,748 | _ | 22,100,748 |
| Taiwan | _ | 18,625,517 | _ | 18,625,517 |
| Thailand | _ | 613,377 | _ | 613,377 |
| Turkey | _ | 1,767,749 | _ | 1,767,749 |
| United Kingdom | _ | 424,620 | _ | 424,620 |
| Total Common Stock | 22,242,789 | 135,101,575 | 1,427,861 | 158,772,225 |
| Preferred Stock | 4,950,627 | 4,877,354 | _ | 9,827,981 |
| Corporate Bonds/Notes | _ | 261,353 | _ | 261,353 |
| Short-Term Investments | 2,908,719 | _ | _ | 2,908,719 |
| Total Investments, at fair value | \$ 30,102,135 | \$140,240,282 | \$ 1,427,861 | \$171,770,278 |
| Liabilities Table | | | | |
| Other Financial Instruments+ | | | | |
| Written Options | \$ - | \$(140,888) | \$ - | \$(140,888) |
| Total Liabilities | \$ - | \$(140,888) | \$ - | \$(140,888) |

For the period ended November 30, 2015, as a result of the fair value pricing procedures for international equities utilized by the Fund, certain securities have transferred in and out of Level 1 and Level 2 measurements during the year. The Fund's policy is to recognize transfers between levels at the beginning of the reporting period. At November 30, 2015, securities valued at \$631,228 and \$626,356 were transferred from Level 1 to Level 2 and Level 2 to Level 1, respectively, within the fair value hierarchy. In addition, securities valued at \$1,671,815 were transferred from Level 2 to Level 3 due to significant unobservable inputs.

+

Other Financial Instruments are derivatives not reflected in the portfolio of investments and may include open forward foreign currency contracts, futures, centrally cleared swaps, OTC swaps and written options. Forward foreign currency contracts, futures and centrally cleared swaps are valued at the unrealized gain (loss) on the instrument. OTC swaps and written options are valued at the fair value of the instrument.

The earlier close of the foreign markets gives rise to the possibility that significant events, including broad market moves, may have occurred in the interim and may materially affect the value of those securities. To account for

this, the Fund may frequently value many of its foreign equity securities using fair value prices based on third party vendor modeling tools to the extent available. Accordingly, a portion of the Fund's investments are categorized as Level 2 investments.

At November 30, 2015, the following over-the-counter written options were outstanding for Voya Emerging Markets High Dividend Equity Fund:

| Number of Contracts | Counterparty | Description | Exercise Price | Expiration Date | Premiums Received | Fair Value | | |
|---------------------|---------------------|--|-------------------|-----------------|----------------------|-------------|--|--|
| Options on Indices | | | | | | | | |
| 514,600 | BNP Paribas Bank | Call on iShares MSCI Emerging Markets ETF | 35.120 USD | 12/18/15 | \$386,757 | \$(134,911) | | |
| 513,500 | Societe Generale | Call on iShares MSCI Emerging Markets ETF | 35.371 USD | 12/04/15 | 386,101 | (5,977) | | |
| | | Total Written OTC Options | | | \$772,858 | \$(140,888) | | |

Voya Emerging Markets High Dividend Equity Fund

as of November 30, 2015 (Unaudited) (Continued)

A summary of derivative instruments by primary risk exposure is outlined in the following tables.

The fair value of derivative instruments as of November 30, 2015 was as follows:

<u>Instrument Type</u> Fair Value

Derivatives not accounted for as hedging instruments

Liability Derivatives

Equity contracts Written options \$140,888 Total Liability Derivatives \$140,888

The following is a summary by counterparty of the fair value of OTC derivative instruments subject to Master Netting Agreements and collateral pledged (received), if any, at November 30, 2015:

| | BNP Paribas Bank | Societe Generale | <u>Totals</u> |
|---|------------------|------------------|---------------|
| Liabilities: | | | |
| Written options | \$ 134,911 | \$ 5,977 | \$140,888 |
| Total Liabilities | \$ 134,911 | \$ 5,977 | \$140,888 |
| | | | |
| Net OTC derivative instruments by counterparty, at fair value | \$ (134,911 |) \$ (5,977 |) (140,888) |
| Total calleteral relatered by the Fired//Decained from | | | |
| Total collateral pledged by the Fund/(Received from counterparty) | \$ - | \$ - | \$- |
| counterparty) | | | |
| Net Exposure ⁽¹⁾ | \$ (134,911 | \$ (5,977) | \$(140,888) |

Positive net exposure represents amounts due from each respective counterparty. Negative exposure represents amounts due from the Fund.

Item 2. Controls and Procedures.

Based on our evaluation conducted within 90 days of the filing date, hereof, the design and operation of the registrant's disclosure controls and procedures are effective to ensure that material information relating to the registrant is made known to the certifying officers by others within the appropriate entities, particularly during the period in which Forms N- Q are being prepared, and the registrant's disclosure controls and procedures allow timely preparation and review of the information for the registrant's Form N-Q and the officer certifications of such Form N-Q.

There were no significant changes in the registrant's internal controls over financial reporting that occurred during (b) the registrant's last fiscal quarter of the period covered by this report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 3. Exhibits.

A separate certification for each principal executive officer and principal financial officer of the registrant as required by Rule 30a-2 under the Act (17 CFR 270.30a-2) is attached hereto as EX-99.CERT.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

(Registrant): Voya Emerging Markets High Dividend Equity Fund

By /s/ Shaun P. Mathews
Shaun P. Mathews
President and Chief Executive Officer

Date: January 22, 2016

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By /s/ Shaun P. Mathews
Shaun P. Mathews
President and Chief Executive Officer

Date: January 22, 2016

By /s/ Todd Modic Todd Modic Senior Vice President and Chief Financial Officer

Date: January 22, 2016