

ING Asia Pacific High Dividend Equity Income Fund
Form N-Q
July 21, 2010

OMB APPROVAL

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UNITED STATES
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: 811-22004

ING Asia Pacific High Dividend Equity Income Fund

(Exact name of registrant as specified in charter)

7337 East Doubletree Ranch Rd., Scottsdale, AZ 85258

(Address of principal executive offices) (Zip code)

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

(Name and address of agent for service)

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

Date of fiscal year end: February 28
Date of reporting period: May 31, 2010

Item 1. Schedule of Investments

The schedules of investments as of the close of the reporting period are set forth below for:

ING Asia Pacific High Dividend Equity Income Fund

The schedules are not audited.

ING Asia Pacific High Dividend Equity Income Fund

PORTFOLIO OF INVESTMENTS
as of May 31, 2010 (Unaudited)

| Shares | | | Value |
|----------------------------|---|--|-------------------|
| COMMON STOCK: 89.6% | | | |
| Australia: 25.5% | | | |
| 175,214 | S | Australia & New Zealand Banking Group Ltd. | \$ 3,316,026 |
| 239,369 | S | BHP Billiton Ltd. | 7,765,168 |
| 101,224 | S | Commonwealth Bank of Australia | 4,434,984 |
| 77,276 | S | CSL Ltd. | 2,047,569 |
| 526,697 | S | Foster s Group Ltd. | 2,445,943 |
| 47,496 | | Macquarie Group Ltd. | 1,751,350 |
| 162,313 | S | National Australia Bank Ltd. | 3,381,481 |
| 45,288 | S | Newcrest Mining Ltd. | 1,221,495 |
| 88,942 | S | Orica Ltd. | 1,893,186 |
| 86,444 | S | Origin Energy Ltd. | 1,085,648 |
| 87,664 | S | QBE Insurance Group Ltd. | 1,445,758 |
| 48,069 | S | Rio Tinto Ltd. | 2,739,942 |
| 101,712 | S | Santos Ltd. | 1,062,486 |
| 170,000 | S | Suncorp-Metway Ltd. | 1,162,558 |
| 342,950 | | TABCORP Holdings Ltd. | 1,928,263 |
| 585,263 | | Tattersall s Ltd. | 1,174,599 |
| 457,707 | S | Telstra Corp. Ltd. | 1,140,719 |
| 89,815 | S | Wesfarmers Ltd. | 2,184,971 |
| 206,365 | S | Westpac Banking Corp. | 4,050,384 |
| 62,818 | S | Woodside Petroleum Ltd. | 2,294,792 |
| 83,916 | S | Woolworths Ltd. | 1,871,005 |
| | | | 50,398,327 |
| China: 11.7% | | | |
| 2,178,000 | | Anhui Expressway Co., Ltd. | 1,323,152 |
| 5,956,000 | | Bank of China Ltd. | 2,959,982 |
| 1,001,000 | | China Coal Energy Co. - Class H | 1,354,213 |
| 3,630,000 | | China Construction Bank | 2,902,898 |
| 696,000 | | China Life Insurance Co., Ltd. | 3,047,035 |
| 2,404,000 | | China Petroleum & Chemical Corp. | 1,899,932 |
| 2,668,000 | | Datang International Power Generation Co., Ltd. | 1,069,238 |
| 3,529,000 | | Industrial and Commercial Bank of China Ltd. | 2,596,447 |
| 1,432,000 | | Jiangsu Expressway Co., Ltd. | 1,281,441 |
| 2,228,000 | | PetroChina Co., Ltd. | 2,428,985 |
| 4,438,000 | | Renhe Commercial Holdings Co. Ltd | 960,839 |
| 65,600 | | Tencent Holdings Ltd. | 1,255,136 |
| | | | 23,079,298 |
| Hong Kong: 14.3% | | | |
| 894,500 | | BOC Hong Kong Holdings Ltd. | 1,993,512 |
| 194,000 | | Cheung Kong Holdings Ltd. | 2,192,366 |
| 592,000 | | China Everbright Ltd. | 1,293,469 |
| 516,000 | | China Merchants Holdings International Co., Ltd. | 1,585,958 |
| 499,000 | | China Mobile Ltd. | 4,670,607 |
| 900,000 | | China Resources Land Ltd. | 1,678,438 |
| 1,529,000 | | CNOOC Ltd. | 2,359,284 |
| 167,209 | | Esprit Holdings Ltd. | 943,700 |
| 93,900 | | Hang Seng Bank Ltd. | 1,256,482 |
| 82,100 | | Hong Kong Exchanges and Clearing Ltd. | 1,266,561 |
| 227,000 | | HongKong Electric Holdings | 1,340,499 |
| 198,000 | | Hutchison Whampoa Ltd. | 1,234,560 |
| 268,000 | | Li & Fung Ltd. | 1,183,559 |
| 509,000 | | Shanghai Industrial Holdings Ltd. | 2,044,227 |

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| | | |
|---------|------------------------------|-------------------|
| 143,000 | Sun Hung Kai Properties Ltd. | 1,894,727 |
| 255,000 | Wharf Holdings Ltd. | 1,249,624 |
| | | 28,187,573 |
| | India: 5.9% | |
| 31,025 | HDFC Bank Ltd. | 1,263,593 |
| 93,402 | ICICI Bank Ltd. | 1,725,245 |
| 55,944 | Infosys Technologies Ltd. | 3,218,365 |
| 76,700 | Oil & Natural Gas Corp. Ltd. | 1,859,405 |
| 116,200 | Reliance Industries Ltd. | 2,579,539 |

ING Asia Pacific High Dividend Equity Income Fund

PORTFOLIO OF INVESTMENTS
as of May 31, 2010 (Unaudited) (continued)

| Shares | | Value |
|-----------|--|-------------------|
| 72,544 | India (continued) Sterlite Industries India Ltd. | \$ 1,041,043 |
| | | 11,687,190 |
| | Indonesia: 2.2% | |
| 1,596,000 | Bank Rakyat Indonesia | 1,444,370 |
| 349,500 | PT Astra International Tbk | 1,573,565 |
| 1,619,500 | Telekomunikasi Indonesia Tbk PT | 1,336,621 |
| | | 4,354,556 |
| | Malaysia: 3.1% | |
| 1,051,600 | Commerce Asset Holdings BHD | 2,164,953 |
| 192,500 | Digi.com BHD | 1,324,157 |
| 354,302 | Public Bank BHD | 1,229,880 |
| 1,753,000 | Resorts World BHD | 1,411,433 |
| | | 6,130,423 |
| | New Zealand: 0.5% | |
| 862,079 | Telecom Corp. of New Zealand Ltd. | 1,090,016 |
| | | 1,090,016 |
| | Philippines: 0.5% | |
| 18,520 | Philippine Long Distance Telephone Co. | 951,360 |
| | | 951,360 |
| | Singapore: 4.8% | |
| 238,500 | DBS Group Holdings Ltd. | 2,347,907 |
| 320,000 | Keppel Corp. Ltd. | 1,990,532 |
| 881,000 | Singapore Press Holdings Ltd. | 2,347,979 |
| 758,000 | Singapore Telecommunications Ltd. | 1,552,262 |
| 90,000 | United Overseas Bank Ltd. | 1,166,175 |
| | | 9,404,855 |
| | South Korea: 8.3% | |
| 96,300 | Kangwon Land, Inc. | 1,350,131 |
| 45,262 | KB Financial Group, Inc. | 1,831,651 |
| 206,370 | Korea Exchange Bank | 2,168,444 |
| 29,990 | KT&G Corp. | 1,454,819 |
| 28,498 | LG Corp. | 1,586,889 |
| 4,785 | Posco | 1,864,733 |
| 7,383 | Samsung Electronics Co., Ltd. | 4,778,207 |
| 9,687 | SK Telecom Co., Ltd. | 1,288,959 |
| | | 16,323,833 |
| | Taiwan: 10.8% | |
| 682,587 | Acer, Inc. | 1,708,142 |
| 1,008,370 | Asia Cement Corp. | 864,089 |
| 2,270,200 | China Steel Corp. | 2,147,802 |
| 779,550 | Chunghwa Telecom Co., Ltd. | 1,492,573 |
| 2,654,975 | First Financial Holding Co., Ltd. | 1,360,308 |
| 169,396 | High Tech Computer Corp. | 2,291,879 |
| 662,400 | HON HAI Precision Industry Co., Ltd. | 2,618,290 |
| 71,000 | MediaTek, Inc. | 1,137,209 |
| 1,247,350 | Quanta Computer, Inc. | 2,238,636 |
| 455,000 | Taiwan Fertilizer Co., Ltd. | 1,260,265 |
| 1,642,052 | Taiwan Semiconductor Manufacturing Co., Ltd. | 3,011,005 |
| 684,083 | Wistron Corp. | 1,122,330 |
| | | 21,252,528 |
| | Thailand: 2.0% | |
| 457,800 | Kasikornbank PCL | 1,203,274 |

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| | | | |
|--|---|---|--------------------|
| 178,000 | | PTT PCL | 1,320,530 |
| 202,700 | | Siam Cement PCL | 1,516,698 |
| | | | 4,040,502 |
| | | Total Common Stock (Cost \$170,525,312) | 176,900,461 |
| REAL ESTATE INVESTMENT TRUSTS: 2.9% | | | |
| 193,000 | S | Australia: 1.1% Westfield Group | 2,075,262 |
| | | | 2,075,262 |
| 3,452,000 | | Singapore: 1.8% Ascendas India Trust | 2,208,495 |
| 990,733 | | Ascendas Real Estate Investment Trust | 1,343,900 |
| | | | 3,552,395 |
| | | Total Real Estate Investment Trusts (Cost \$6,067,486) | 5,627,657 |

ING Asia Pacific High Dividend Equity Income Fund

PORTFOLIO OF INVESTMENTS
as of May 31, 2010 (Unaudited) (continued)

| Shares | | Value |
|------------------------------------|---|------------------------------|
| EXCHANGE-TRADED FUNDS: 2.4% | | |
| 271,052 | South Korea: 2.4% Samsung Kodex200 Exchange Traded Fund | \$ 4,830,450 |
| | Total Exchange-Traded Funds (Cost \$2,652,883) | 4,830,450 |
| PREFERRED STOCK: 2.2% | | |
| 45,460 | South Korea: 2.2% Hyundai Motor Co. | 1,976,334 |
| 5,401 | Samsung Electronics Co., Ltd. | 2,304,127 |
| | Total Preferred Stock (Cost \$3,611,161) | 4,280,461 |
| | Total Investments in Securities (Cost \$182,856,842)* | 97.1% \$ 191,639,029 |
| | Other Assets and Liabilities - Net | 2.9 5,697,460 |
| | Net Assets | 100.0% \$ 197,336,489 |
| S | All or a portion of this security has been identified by the Fund to cover future collateral requirements for applicable futures, options, swaps, foreign currency contracts and/or when-issued or delayed-delivery securities. | |
| * | Cost for federal income tax purposes is \$185,473,835. | |
| | Net unrealized appreciation consists of: | |
| | Gross Unrealized Appreciation | \$ 29,546,172 |
| | Gross Unrealized Depreciation | (23,380,978) |
| | Net Unrealized Appreciation | \$ 6,165,194 |

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PORTFOLIO OF INVESTMENTS
as of May 31, 2010 (Unaudited) (continued)

| Industry | Percentage of Net Assets |
|------------------------------------|-------------------------------------|
| Consumer Discretionary | 7.0% |
| Consumer Staples | 4.0 |
| Energy | 9.3 |
| Financials | 34.7 |
| Health Care | 1.0 |
| Industrials | 5.6 |
| Information Technology | 13.1 |
| Materials | 11.3 |
| Telecommunication Services | 7.5 |
| Utilities | 1.2 |
| Other Long-Term Investments | 2.4 |
| Other Assets and Liabilities - Net | 2.9 |
| Net Assets | 100.0% |

ING Asia Pacific High Dividend Equity Income Fund

PORTFOLIO OF INVESTMENTS
as of May 31, 2010 (Unaudited) (continued)

Fair Value Measurements

The following is a summary of the fair valuations according to the inputs used as of May 31, 2010 in valuing the Fund's assets and liabilities:

| | Quoted Prices in Active Markets for Identical Investments (Level 1) | Significant Other Observable Inputs# (Level 2) | Significant Unobservable Inputs (Level 3) | Fair Value at 5/31/2010 |
|--------------------------------------|--|---|--|-------------------------------|
| Asset Table | | | | |
| Investments, at value | | | | |
| Common Stock | | | | |
| Australia | \$ | \$ | 50,398,327 | \$ 50,398,327 |
| China | 2,428,985 | 20,650,313 | | 23,079,298 |
| Hong Kong | | 28,187,573 | | 28,187,573 |
| India | | 11,687,190 | | 11,687,190 |
| Indonesia | | 4,354,556 | | 4,354,556 |
| Malaysia | | 6,130,423 | | 6,130,423 |
| New Zealand | | 1,090,016 | | 1,090,016 |
| Philippines | | 951,360 | | 951,360 |
| Singapore | | 9,404,855 | | 9,404,855 |
| South Korea | | 16,323,833 | | 16,323,833 |
| Taiwan | | 21,252,528 | | 21,252,528 |
| Thailand | | 4,040,502 | | 4,040,502 |
| Total Common Stock | 2,428,985 | 174,471,476 | | 176,900,461 |
| Real Estate Investment Trusts | 2,208,495 | 3,419,162 | | 5,627,657 |
| Exchange-Traded Funds | 4,830,450 | | | 4,830,450 |
| Preferred Stock | | 4,280,461 | | 4,280,461 |
| Total Investments, at value | \$ 9,467,930 | \$ 182,171,099 | \$ | \$ 191,639,029 |
| Liabilities Table | | | | |
| Other Financial Instruments+: | | | | |
| Written options | | (258,794) | | (258,794) |
| Total Liabilities | \$ | \$ (258,794) | \$ | \$ (258,794) |

+ Other Financial Instruments are derivatives not reflected in the Portfolio of Investments and may include open forward foreign currency contracts, futures, swaps, and written options. Forward foreign currency contracts and futures are reported at their unrealized gain/loss at measurement date which represents the amount due to/from the Fund. Swaps and written options are reported at their market value at measurement date.

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 Portfolio 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 significant portion of the Portfolio's investments are categorized as Level 2 investments.

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PORTFOLIO OF INVESTMENTS
as of May 31, 2010 (Unaudited) (continued)

Written OTC Call Options

| # of Contracts | Counterparty | Description | Expiration Date | Strike Price/Rate | | Premiums Received | Value |
|-------------------|----------------|-----------------------------|--------------------|----------------------|--------|----------------------|-----------|
| 4,675 | Deutsche Bank | Australia S&P/ASX 200 Index | 06/10/10 | 4,605.6600 | AUD \$ | 498,870 \$ | (82,538) |
| 4,850 | Merrill Lynch | Hong Kong Hang Seng Index | 06/10/10 | 20,109.1500 | HKD | 359,826 | (143,949) |
| 50,900,000 | Citigroup | Korea KOSPI 200 Index | 06/10/10 | 219.8110 | KRW | 229,661 | (22,210) |
| 33,600 | Morgan Stanley | Taiwan TAIEX Index | 06/10/10 | 7,675.9135 | TWD | 181,302 | (10,097) |
| | | | | | | \$ 1,269,659 \$ | (258,794) |

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**PORTFOLIO OF INVESTMENTS
as of May 31, 2010 (Unaudited) (continued)**

On March 19, 2008, the FASB issued Statement of Financial Accounting Standards No. 161 (SFAS No. 161), Disclosure about Derivative Instruments and Hedging Activities. This new accounting statement requires enhanced disclosures about an entity's derivative and hedging activities. Entities are required to provide enhanced disclosures about (a) how and why an entity invests in derivatives, (b) how derivatives are accounted for under SFAS No. 133, and (c) how derivatives affect an entity's financial position, financial performance, and cash flows. SFAS No. 161 also requires enhanced disclosures regarding credit-risk related contingent features of derivative instruments.

The following is a summary of the fair valuations of the Fund's derivative instruments categorized by risk exposure as of May 31, 2010:

| | Derivatives Fair Value* | |
|------------------|--------------------------------|-----------|
| Equity contracts | \$ | (258,794) |
| Total | \$ | (258,794) |

* Forward foreign currency contracts and futures are reported at their unrealized gain/loss at measurement date which represents the amount due to/from the Fund. Swaps, purchased options and written options are reported at their market value at measurement date.

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): ING Asia Pacific High Dividend Equity Income Fund

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

Date: July 21, 2010

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: July 21, 2010

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

Date: July 21, 2010
