JOHN HANCOCK PREMIUM DIVIDEND FUND Form N-CSR December 21, 2016

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED

MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number 811-05908

<u>John Hancock Premium Dividend Fund</u> (Exact name of registrant as specified in charter)

<u>601 Congress Street, Boston, Massachusetts 02210</u> (Address of principal executive offices) (Zip code)

Salvatore Schiavone

Treasurer

601 Congress Street

Boston, Massachusetts 02210

(Name and address of agent for service)

Registrant's telephone number, including area code: 617-663-4497

Date of fiscal year end: October 31 Date of reporting period: October 31, 2016

ITEM 1. REPORT TO SHAREHOLDERS.

John Hancock

Premium Dividend Fund

Ticker: PDT

Annual report 10/31/16

Managed distribution plan

The fund adopted a managed distribution plan (Plan). Under the Plan, the fund makes monthly distributions of an amount equal to \$0.0975 per share, which will be paid monthly until further notice. The fund may make additional distributions (i) for purposes of not incurring federal income tax on investment company taxable income and net capital gain, if any, not included in such regular distributions and (ii) for purposes of not incurring federal excise tax on ordinary income and capital gain net income, if any, not included in such regular monthly distributions.

The Plan provides that the Board of Trustees of the fund may amend the terms of the Plan or terminate the Plan at any time without prior notice to the fund's shareholders. The Plan will be subject to periodic review by the fund's Board of Trustees.

You should not draw any conclusions about the fund's investment performance from the amount of the fund's distributions or from the terms of the Plan. The fund's total return at NAV is presented in the Financial highlights.

With each distribution that does not consist solely of net investment income, the fund will issue a notice to shareholders and an accompanying press release that will provide detailed information regarding the amount and composition of the distribution and other related information. The amounts and sources of distributions reported in the notice to shareholders are only estimates and are not being provided for tax reporting purposes. The actual amounts and sources of the amounts for tax reporting purposes will depend upon the fund's investment experience during the remainder of its fiscal year and may be subject to changes based on tax regulations. The fund will send you a Form 1099-DIV for the calendar year that will tell you how to report these distributions for federal income tax purposes. The fund may at times distribute more than its net investment income and net realized capital gains; therefore, a portion of your distribution may result in a return of capital. A return of capital may occur, for example, when some or all of the money that you invested in the fund is paid back to you. A return of capital does not necessarily reflect the fund's investment performance and should not be confused with "yield" or "income."

A message to shareholders

Dear shareholder,

The past 12 months were generally positive for U.S. equities. In spite of two corrections declines of 10% or more markets hit all-time highs this summer, buoyed by decent corporate earnings and relatively light trading volume. Although economic growth remains more sluggish than many would like, consumer spending and employment gains have been supportive of the continued stock market advance.

That said, there are a number of looming uncertainties that have given investors pause. President-elect Donald J. Trump will face the challenges of uniting a fractured electorate and reigniting growth in a lethargic economy. The U.S. Federal Reserve, after a year of holding tight on interest rates, will meet in December to discuss whether the economy is stable enough to handle another increase in the federal funds rate as it seeks to normalize monetary policy. Advisors and investors are concerned, as we close out the eighth year of a bull market, that there is more that could go wrong than could continue to go right. It is the kind of environment that underscores the value of professional financial guidance and the importance of diversification and a long-term perspective.

On behalf of everyone at John Hancock Investments, I'd like to take this opportunity to thank you for the continued trust you've placed in us.

Sincerely,

Andrew G. Arnott President and Chief Executive Officer John Hancock Investments

This commentary reflects the CEO's views, which are subject to change at any time. All investments entail risks, including the possible loss of principal. Diversification does not guarantee a profit or eliminate the risk of a loss. For more up-to-date information, you can visit our website at jhinvestments.com.

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John Hancock Premium Dividend Fund

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Your fund at a glance

INVESTMENT OBJECTIVE

The fund seeks to provide high current income, consistent with modest growth of capital.

AVERAGE ANNUAL TOTAL RETURNS AS OF 10/31/16 (%)

The index shown is a blended index that is 70% Bank of America Merrill Lynch Preferred Stock DRD Eligible Index and 30% S&P 500 Utilities Index.

The Bank of America Merrill Lynch Preferred Stock DRD Eligible Index consists of investment-grade fixed-rate U.S. dollar-denominated preferred securities and fixed-to-floating-rate securities. The index includes securities having a minimum remaining term of at least one year, Dividend Received Deduction (DRD) eligible preferred stock and senior debt.

The S&P 500 Utilities Index is a capitalization-weighted index that consists of companies in the S&P 500 Index that are primarily involved in water, electrical power, and natural gas distribution industries.

It is not possible to invest directly in an index. Index figures do not reflect expenses or sales charges, which would result in lower returns.

The fund's most recent performance and current annualized distribution rate can be found at jhinvestments.com.

The fund's performance at net asset value (NAV) is different from the fund's performance at closing market price because the closing market price is subject to the dynamics of secondary market trading, which could cause the fund to trade at a discount or premium to its NAV at any time.

The performance data contained within this material represents past performance, which does not guarantee future results.

PERFORMANCE HIGHLIGHTS OVER THE LAST TWELVE MONTHS

Dividend-paying securities generated solid gains

Preferred securities, utility common stocks, and other dividend payers advanced in the first half of the 12-month period, as interest rates fell, but their second-half progress was hampered by rate-hike concerns.

Energy-related holdings performed well

Merger-and-acquisition activity, coupled with solid earnings results, helped boost energy-related pipeline companies and electric and gas utility holdings.

Detractors from performance were limited

Holdings in the preferred securities of troubled financial company Deutsche Bank AG and generic drugmaker Teva Pharmaceuticals Industries, Ltd. were among the fund's few poor performers.

PORTFOLIO COMPOSITION AS OF 10/31/16 (%)

A note about risks

As is the case with all closed-end funds, shares of this fund may trade at a discount or a premium to the fund's net asset value (NAV). An investment in the fund is subject to investment and market risks, including the possible loss of the entire principal invested. There is no guarantee prior distribution levels will be maintained, and distributions may include a substantial return of capital, which may increase the potential tax gain or reduce the potential tax loss of a subsequent sale of shares of the fund. Fixed-income investments are subject to interest-rate and credit risk; their value will normally decline as interest rates rise or if a creditor, grantor, or counterparty is unable or unwilling to make principal, interest, or settlement payments. Investments in higher-yielding, lower-rated securities are subject to a higher risk of default. An issuer of securities held by the fund may default, have its credit rating downgraded, or otherwise perform poorly, which may affect fund performance. Liquidity the extent (if at all) to which a security may be sold or a derivative position closed without negatively affecting its market value may be impaired by reduced trading volume, heightened volatility, rising interest rates, and other market conditions. The fund's use of leverage creates additional risks, including greater volatility of the fund's NAV, market price, and returns. There is no assurance that the fund's leverage strategy will be successful. The fund will normally invest at least 25% of its managed assets in securities of companies in the utilities industry. Such an investment focus makes the fund more susceptible to factors adversely affecting the utilities industry than a more broadly diversified fund. Sector investing is subject to greater risks than the market as a whole. Hedging, derivatives, and other strategic transactions may increase a fund's volatility and could produce disproportionate losses, potentially more than the fund's principal investment.

Discussion of fund performance

An interview with Portfolio Manager Gregory K. Phelps, John Hancock Asset Management a division of Manulife Asset Management (US) LLC

Gregory K. Phelps

Portfolio Manager John Hancock Asset Management

What was the market environment like for preferred securities during the 12 months ended October 31, 2016?

Dividend-paying securities posted solid gains for the year, thanks primarily to the advances they enjoyed in the first six months of 2016. That's when falling long-term interest rates made income-producing investments including preferred securities and utility common stocks more attractive compared with bonds, whose yields had fallen to near-generation lows. Fears of a global economic recession further stoked demand for dividend-paying securities, particularly among investors seeking refuge from significant sell-offs in global equity markets.

In the final months of the period, however, income-producing investments struggled, hampered by concerns about a possible December U.S. interest-rate hike. Some of the major dividend-paying segments, particularly utility common stocks, proved especially vulnerable to bouts of profit taking given concerns about their high valuations. After the U.S. Federal Reserve (Fed) decided not to raise short-term policy rates at its September meeting, income-producing investments temporarily regained some lost ground. However, renewed worries about a possible December rate cut and uncertainty over the outcome of the November U.S. election once again put downward pressure on income-producing investments in the final weeks of the period.

What's your view on income-producing investments?

After the U.S. central bank's September meeting, Fed Chair Janet Yellen noted that economic conditions had strengthened since the first half of the year. To many observers, these remarks suggested that a rate hike was more imminent than it had been at any time so far in 2016. While a December quarter-point rate hike may be likely, we believe that income-producing investments had already priced it in by period end. Assessing the future of interest rates beyond 2016 is far trickier, in our view. A lot will depend on the policies of President-Elect Donald J. Trump, which we believe will have a significant impact on economic growth and interest-rate hikes over the longer term, but our long-term optimism for dividend-paying stocks remains intact. However, despite these uncertainties, our view is that the aging of the global population should foster ongoing demand for

"Dividend-paying securities posted solid gains for the year, thanks primarily to the advances they enjoyed in the first six months of 2016."

preferred securities and utility common stocks as older people migrate larger portions of their portfolios into income-producing investments.

What holdings contributed to performance?

One of the portfolio's energy-related investments was among its best performers for the 12-month period. Spectra Energy Corp., a leading U.S. pipeline company, fared particularly well early on in the period, as investors were encouraged that the company's earnings were resilient in the face of lower oil and gas prices. Spectra's February 2016 decision to raise its dividend was another plus for the holding and helped to sustain its strong performance. Spectra received another late-period boost from the news that it planned to merge in the first quarter of 2017 with Canadian company Enbridge, Inc., creating what the two companies billed as the largest energy infrastructure company in North America. Another utility common stock that performed well was electric and gas utility company CenterPoint Energy, Inc., which benefited from improved earnings and the company's growing service territory. Electric and gas utility company Black Hills Corp. also performed well, lifted by its growing regulated gas distribution business and dividend increases.

Among financials, some of the fund's Morgan Stanley preferred holdings performed well. The company called, or redeemed, a number of its preferred shares earlier in the year. While some of our holdings were called, those that weren't rose in value in response to the company's solid financial results and strong demand among investors seeking high-coupon securities with good call

SECTOR COMPOSITION AS OF 10/31/16 (%)

"In the first half of the period, we sold some of the fund's lower-yielding utility holdings at prices we viewed as attractive, given the very strong demand for such stocks at the time."

protection. The fund also benefited from holding preferred securities issued by Citigroup, Inc., another positive performer that benefited from solid financial performance and strong demand for call-protected, higher-coupon preferreds.

What hurt the fund's performance?

Detracting from the fund's results were holdings in the preferred securities of Deutsche Bank AG. Low and negative interest rates in some European countries eroded bank earnings on the Continent. Concerns about nonperforming loans also weighed on Deutsche Bank; it suffered further toward the end of the period amid uncertainty about the size of a penalty from the U.S. Department of Justice for a decade-old misselling of residential mortgage-backed securities. Also disappointing were holdings in the preferred securities of generic drugmaker Teva Pharmaceuticals Industries, Ltd., which faltered amid drug pricing criticisms.

Were there any significant changes to the portfolio?

In the first half of the period, we sold some of the fund's lower-yielding utility holdings at prices we viewed as attractive, given the very strong demand for such stocks at the time. In many cases, we used the proceeds from these sales to purchase more of the higher-yielding pipeline companies the fund already held, including Spectra. We felt that these securities were very attractively valued,

TOP 10 ISSUERS AS OF 10/31/16 (%)

Bank of America Corp.	4.4
Dominion Resources, Inc.	4.0
Kinder Morgan, Inc.	3.9
PPL Corp.	3.7
JPMorgan Chase & Co.	3.7
Spectra Energy Corp.	3.6
Teva Pharmaceutical Industries, Ltd.	3.4
Morgan Stanley	3.3
SCE Trust	3.2
Interstate Power & Light Company	3.1
TOTAL	36.3

As a percentage of total investments.

Cash and cash equivalents are not included.

especially given our view that oil prices had bottomed at the time and were set to move higher. We were further encouraged by the fact that pipeline companies were reporting that their revenues hadn't been negatively affected by low oil prices and that some of these companies actually raised their dividends. We also increased the fund's preferred shares in Kinder Morgan, Inc.

More recently, some of the fund's Morgan Stanley, as we mentioned earlier, and Entergy preferred issues were called. We were able to replace these with comparable yielding, newly issued convertible preferred securities from utility companies that need to finance acquisitions, including Dominion Resources, Inc. and Great Plains Energy, Inc.

MANAGED BY

Gregory K. Phelps
On the fund since
1995
Investing since 1981
Joseph H. Bozoyan,
CFA
On the fund since
2015
Investing since 1993

The views expressed in this report are exclusively those of Gregory K. Phelps, John Hancock Asset Management, and are subject to change. They are not meant as investment advice. Please note that the holdings discussed in this report may not have been held by the fund for the entire period. Portfolio composition is subject to review in accordance with the fund's investment strategy and may vary in the future. Current and future portfolio holdings are subject to risk

Fund's investments

As of 10-31-16

Shares Value

Preferred securities

102.6% (69.0% of \$801,331,413

Total investments) (Cost \$757,022,284)

Consumer

20,133,457 staples 2.6%

Food and staples retailing 2.6%

Ocean

Spray

Cranberries, 224,250 20,133,457

Inc.,

Series A,

6.250% (S)

Energy 5.9% 45,727,650

Oil, gas and consumable fuels 5.9%

Kinder

Morgan,

993,000 45,727,650

Inc.,

9.750%

Financials 52.6% 410,620,351

Banks 30.4%

Bank

of

980,000 25,284,000 America

Corp., 6.375% (Z)

Bank

of

America 360,000 9,464,400

Corp., 6.625% (Z)

Bank

of

America

Corp., 630,000 16,128,000 Depositary

Shares,

Series D,

6.204% (Z)

192,500 4,964,575

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Barclays
Bank
PLC,
Series 3, 7.100%
Barclays
Bank
           360,000 9,374,400
PLC,
Series 5, 8.125%
BB&T
           770,000 19,866,000
Corp.,
5.625% (Z)
BB&T
Corp.
(Callable
           205,000 5,204,950
11-1-17),
5.200% (Z)
BB&T
Corp.
           110,000 2,845,700
(Callable
6-1-18),
5.200%
Citigroup,
Inc.
(6.875%
to
11-15-23,
then
           137,223 3,936,928
3
month
LIBOR
4.130%) (Z)
Citigroup,
Inc.
(7.125%
to
9-30-23,
           195,650 5,579,938
then
3
month
LIBOR
4.040%) (Z)
Citigroup,
Inc.,
Depositary
           338,830 9,660,043
Shares,
Series AA,
8.125% (L)(Z)
JPMorgan 490,000 12,622,400
Chase
```

& Co., 5.450% (Z) JPMorgan Chase & 200,000 5,084,000 Co., 5.500% (Z) JPMorgan Chase & 650,000 17,342,000 Co., 6.100% (Z) JPMorgan Chase & 245,000 6,583,150 Co., 6.300% (Z) JPMorgan Chase & 35,000 959,700 Co., 6.700% (Z) Santander Holdings USA, 500,000 12,825,000 Inc., Series C, 7.300% The **PNC** Financial Services 180,000 4,570,200 Group, Inc., 5.375% The **PNC** Financial Services Group, Inc. (6.125% 311,600 8,787,120 to 5-1-22, then 3 month **LIBOR** 4.067%) (Z) 500,000 12,960,000

```
U.S.
Bancorp,
5.150%
U.S.
Bancorp
(6.500\%
to
1-15-22,
          351,000 10,301,850
then
3
month
LIBOR
4.468%) (Z)
Wells
Fargo
          205,000 5,371,000
&
Company,
6.000% (Z)
SEE NOTES TO FINANCIAL STATEMENTS
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Shares Value Financials (continued) Banks (continued) Wells Fargo & 1,017,000 \$27,601,380 Company, 8.000% (Z)Capital markets 16.4% Deutsche Bank Contingent Capital 241,725 5,574,179 Trust II, 6.550% Deutsche Bank Contingent Capital 557,000 13,529,530 Trust III, 7.600% Morgan Stanley, 23,043,934 842,557 6.625% (Z) Morgan Stanley (6.375% 10-15-24, then 249,227 6,878,665 3 month **LIBOR** + 3.708%) (Z) Morgan Stanley (7.125% to 10-15-23, then 300,000 8,754,000 3 month **LIBOR** 4.320%) (Z)

1,015,000 25,781,000

State Street Corp., 5.250% (Z) State Street 80,000 2,128,000 Corp., 6.000% (Z) State Street Corp. (5.900% to 3-15-24, 25,000 701,250 then 3 month **LIBOR** + 3.108%) (Z) The Bank of New 442,000 11,713,000 York Mellon Corp., 5.200% The Goldman Sachs 920,000 23,754,400 Group, Inc., 5.950% The Goldman Sachs Group, 250,000 6,455,000 Inc., Series B, 6.200% (Z) Consumer finance 4.1% Capital One Financial 100,000 2,581,000 Corp., 6.000% (Z) Capital 80,000 2,135,200 One Financial Corp.,

6.200% (Z) Capital One Financial 81,196 2,156,566 Corp., 6.250% (Z) Capital One Financial 105,000 2,949,450 Corp., 6.700% (Z) SLM Corp., 445,500 22,390,830 Series A, 6.970% Insurance 1.7% Aegon NV, 75,000 1,944,750 6.500% Prudential Financial, 50,000 1,319,500 Inc., 5.750% Prudential PLC, 175,000 4,634,000 6.750% (Z) W.R. Berkley 190,377 4,879,363 Corp., 5.625% Health care 5.1% 39,908,698 Pharmaceuticals 5.1% Teva Pharmaceutical Industries, 52,650 39,908,698 Ltd.,

7.000%

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Shares Value Industrials 0.4% \$3,493,800 Machinery 0.4% Stanley Black & 135,000 3,493,800 Decker, Inc., 5.750% Real estate 1.8% 14,369,760 Equity real estate investment trusts 1.8% Senior Housing Properties 510,000 12,699,000 Trust, 5.625% Ventas Realty 63,000 1,670,760 LP, 5.450% Telecommunication 23,453,175 services 3.0% Diversified telecommunication services 0.6% Owest 107,500 Corp., 2,714,375 6.125% Verizon Communications 60,000 1,615,800 Inc., 5.900% (Z) Wireless telecommunication services 2.4% Telephone & Data 100,000 2,539,000 Systems, Inc., 5.875% Telephone & Data 285,000 7,384,350 Systems, Inc., 6.625% Telephone 170,000 4,365,600 & Data

Systems,

Inc., 6.875% United States Cellular 185,000 4,834,050 Corp., 6.950% Utilities 31.2% 243,624,522 Electric utilities 23.1% Duke Energy 180,000 4,698,000 Corp., 5.125% (Z) Great **Plains** Energy, 436,000 23,103,640 Inc., 7.000% Gulf Power 52,400 5,397,829 Company, 5.600% **HECO** Capital Trust 181,000 4,772,970 III, 6.500% Interstate Power & 1,340,000 35,992,400 Light Company, 5.100% NextEra Energy Capital 185,000 4,636,100 Holdings, Inc., 5.125% NextEra Energy Capital 320,000 8,185,600 Holdings, Inc., 5.700% (Z) NextEra Energy, 30,000 1,522,500 Inc., 6.123% (Z) **NSTAR** 13,347 1,308,006

Electric

NSTAR Electric Company, 4.780%	100,000	9,951,000		
PPL Capital Funding, Inc., 5.900%	1,450,320	37,795,339		
SCE Trust I, 5.625%	265,000	6,778,700		
SCE Trust II, 5.100%	1,208,500	30,961,770		
The Southern Company, 6.250% (Z)	155,000	4,140,050		
Union Electric Company, 3.700%	12,262	1,180,218		
Multi-utilities 8.1%				
BGE Capital Trust II, 6.200%	690,000	17,767,500		
Dominion Resources, Inc., 6.750%	553,000	27,898,850		
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Company, 4.250%

Shares Value Utilities (continued) Multi-utilities (continued) DTE Energy 235,000 \$6,016,000 Company, 5.250% DTE Energy 180,000 4,584,600 Company, 6.500% Integrys Holding, Inc. (6.000% to 8-1-23, 255,000 6,933,450 then 3 month **LIBOR** + 3.220%) Common stocks 45.5% (30.6% of Total \$355,366,642 investments) (Cost \$231,431,853) Energy 7.5% 58,545,606 Oil, gas and consumable fuels 7.5% BP PLC, 60,000 2,133,000 **ADR** Chevron Corp. (L)(Z)^{67,000} 7,018,250 Royal Dutch Shell PLC, 142,000 7,073,020 ADR, Class A Spectra Energy 1,012,230 42,321,336 Corp. (L)(Z)Telecommunication 20,176,000 services 2.6% Diversified telecommunication services 2.6% AT&T, 300,000 11,037,000 Inc. (L)(Z)Verizon Communication,000 9,139,000 Inc. (L)(Z)

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Utilities 35.4 Electric utili		276,645,036
Alliant Energy	800,000	30,440,000
Corp.	,	, ,
American		
Electric		
Power	200,000	12,968,000
Company,	,	,,,,
Inc. $(L)(Z)$		
Avangrid,		
Inc. $(L)(Z)$	381,500	15,034,915
Duke		
Energy	285,000	22,805,700
Corp. $(L)(Z)$		22,002,700
E-4		
Corp. (L)(Z)	60,000	4,420,800
Eversource	,	
Eversource Energy (L)(Z	405,000	22,299,300
First Energy	<i>L)</i>	
FirstEnergy Corp. (L)(Z)	201,450	6,907,721
OGE	,	
Energy	400,000	12,416,000
Corp. (L)(Z)	•	12,410,000
Pinnacle	,	
West		
Capital	50,000	3,806,500
Corp.		
PPL Corp. (L)(Z)	150,000	5,151,000
The)	
Southern	75,000	3,867,750
Company	73,000	3,807,730
Xcel		
Energy,	240,000	9,972,000
Inc. $(L)(Z)$	240,000	9,972,000
Gas utilities	1 1%	
Atmos	1.1 /0	
Energy	80,000	5,951,200
Corp. (L)(Z)	*	3,931,200
ONE Gas,	,	
Inc.	42,500	2,604,400
Multi-utilitie	ac 15 1%	
	28 13.170	
Black	220,000	12 607 000
Hills	220,000	13,607,000
Corp.		
CenterPoint	1.065.000	24 202 000
Energy,	1,003,000	24,282,000
Inc. $(L)(Z)$		
Dominion		
Resources,		

Inc. (L)(Z)