

Dreyfus Midcap Index Fund, Inc.



SEMIANNUAL REPORT

April 30, 2018

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Dreyfus Midcap Index Fund,
Inc. **The Fund**

A LETTER FROM THE PRESIDENT OF DREYFUS

Dear Shareholder:

We are pleased to present this semiannual report for Dreyfus Midcap Index Fund, Inc., covering the six-month period from November 1, 2017 through April 30, 2018. For information about how the fund performed during the reporting period, as well as general market perspectives, we provide a Discussion of Fund Performance on the pages that follow.

Heightened volatility has returned to the financial markets. After a period of unusually mild price swings in 2017, inflation concerns, geopolitical tensions and potential trade disputes caused volatility to increase substantially over the opening months of 2018. As a result, U.S. stocks and bonds either produced flat returns or lost a degree of value over the first four months of the year.

Stocks set a series of new record highs through January 2018 before market volatility took its toll, enabling stocks across all capitalization ranges to produce positive returns for the full six-month reporting period. Stocks gained value amid growing corporate earnings, improving global economic conditions and the enactment of tax reform legislation and other government policy reforms. In contrast, most sectors of the U.S. bond market lost a degree of value when short-term interest rates climbed, inflation expectations increased and yield differences began to widen between corporate-backed bonds and U.S. Treasury securities.

In our judgment, underlying market fundamentals remain strong, characterized by sustained economic growth, a robust labor market and strong consumer and business confidence. We expect these favorable conditions to persist, but we remain aware of economic and political developments that could negatively affect the markets. As always, we encourage you to discuss the risks and opportunities of today's investment environment with your financial advisor.

Thank you for your continued confidence and support.

Sincerely,



Renee Laroche-Morris
President
The Dreyfus Corporation
May 15, 2018

DISCUSSION OF FUND PERFORMANCE (Unaudited)

For the period from November 1, 2017 through April 30, 2018, as provided by Thomas J. Durante, CFA, Karen Q. Wong, CFA, and Richard A. Brown, CFA, Portfolio Managers

Market and Fund Performance Overview

For the six-month period ended April 30, 2018, Dreyfus Midcap Index Fund, Inc.'s Class I shares produced a total return of 2.69%, and its Investor shares returned 2.56%.¹ In comparison, the S&P MidCap 400[®] Index (the "Index"), the fund's benchmark, produced a total return of 2.83% for the same period.^{2,3}

Mid-cap stocks advanced modestly during the reporting period amid improving economic prospects and reports of better-than-expected corporate earnings. The difference in returns between the fund and the Index was primarily the result of transaction costs and operating expenses that are not reflected in the Index's results.

The Fund's Investment Approach

The fund seeks to match the performance of the Index. To pursue its goal, the fund generally is fully invested in stocks included in the Index and in futures whose performance is tied to the Index. The fund generally invests in all 400 stocks in the Index in proportion to their weighting in the Index.

The Index is an unmanaged index of 400 common stocks of medium-sized companies. S&P weights each company's stock in the Index by its market capitalization (i.e., the share price times the number of shares outstanding), adjusted by the number of available float shares (i.e., those shares available to public investors). Companies included in the Index generally have market capitalizations ranging between approximately \$1.4 billion and \$5.9 billion, to the extent consistent with market conditions.

Positive Economic Trends in the Face of Rising Volatility

A positive economic backdrop supported U.S. equity markets in late 2017, including sustained GDP growth, robust labor markets, and higher growth forecasts from the Federal Reserve Board (the "Fed"). Passage of tax reform legislation in December 2017 sparked additional market gains, driving the Index to new all-time highs in January 2018.

Economic data in January 2018 indicated robust levels of consumer spending during the critical year-end shopping season, and long-awaited signs of wage growth began to appear. However, concerns about rising inflationary pressures and prospects for more aggressive interest-rate hikes by the Fed began to weigh on market sentiment. In March 2018, political rhetoric regarding potentially protectionist U.S. trade policies took a toll on stocks of U.S.

DISCUSSION OF FUND PERFORMANCE (*Unaudited*) (*continued*)

companies with substantial overseas exposure, including industrial firms and exporters. Markets remained volatile through the remainder of the reporting period.

In this environment, mid-cap stocks produced slightly lower returns than their large-cap counterparts.

Health Care Stocks Led the Market's Rise

For the reporting period overall, financial stocks posted the highest returns of the Index's various market segments, supported by banks benefiting from wider lending margins and cost savings stemming from new technologies. Capital markets companies, online brokerage firms, and mutual fund companies fared well as trading volumes increased.

The energy sector surged later in the reporting period when rising crude oil prices and the discovery of new North American oil-and-gas reserves sparked increased production among mid-sized exploration-and-production companies. Higher costs for the materials used in hydraulic fracturing were not enough to fully offset the positive impact of higher commodity prices. The health care sector also generally fared well during the reporting period despite weakness among some pharmaceutical developers. Makers and distributors of medical equipment and supplies benefited from faster regulatory approvals of new products, as did some biotechnology companies. In addition, higher levels of mergers-and-acquisitions activity helped boost the stock prices of mid-sized biotechnology companies that were targeted for takeovers by larger firms. Finally, hospital operators and health plan providers experienced rising demand during a severe flu season.

Laggards for the reporting period included industrial companies hurt by potentially escalating trade disputes affecting steel producers, and some machinery manufacturers struggled with write-downs after previous expansions proved excessive. Some staffing agencies posted losses, and electrical equipment makers encountered higher input costs. In the materials sector, chemical producers were constrained by higher oil costs and a limited ability to raise prices on their products. Other relatively weak areas included the traditionally defensive utilities and real estate sectors, whose dividend yields became less attractive to investors in the rising interest-rate environment. The utilities sector also was hurt by tax reform legislation that eliminated tax deferrals and reduced cash flows, and the real estate sector encountered higher financing costs and softness among retail properties.

Replicating the Performance of the Index

Although we do not actively manage the fund's investments in response to macroeconomic trends, it is worth noting that the U.S. and global economic recoveries appear to remain intact, supported by stimulative monetary and fiscal policies that have helped boost corporate earnings. However, the market's currently constructive conditions could be undermined by unexpected political and economic developments as geopolitical tensions potentially escalate and monetary policymakers move gradually away from the aggressively

accommodative policies of the past decade. As always, we have continued to monitor the factors considered by the fund's investment model in light of current market conditions.

May 15, 2018

¹ *Total return includes reinvestment of dividends and any capital gains paid. Past performance is no guarantee of future results. Share price and investment return fluctuate such that upon redemption, fund shares may be worth more or less than their original cost.*

² *Source: Lipper Inc. — The S&P MidCap 400[®] Index provides investors with a benchmark for mid-sized companies. The index measures the performance of mid-sized companies, reflecting the distinctive risk and return characteristics of this market segment. Investors cannot invest directly in any index.*

³ *“Standard & Poor’s[®],” “S&P[®],” and “S&P MidCap 400[®]” are registered trademarks of Standard & Poor’s Financial Services LLC, and have been licensed for use on behalf of the fund. The fund is not sponsored, endorsed, managed, advised, sold, or promoted by Standard & Poor’s and its affiliates and Standard & Poor’s and its affiliates make no representation regarding the advisability of investing in the fund.*

Equities are subject generally to market, market sector, market liquidity, issuer, and investment style risks, among other factors, to varying degrees, all of which are more fully described in the fund’s prospectus.

Stocks of mid-cap companies often experience sharper price fluctuations than stocks of large-cap companies.

UNDERSTANDING YOUR FUND'S EXPENSES (Unaudited)

As a mutual fund investor, you pay ongoing expenses, such as management fees and other expenses. Using the information below, you can estimate how these expenses affect your investment and compare them with the expenses of other funds. You also may pay one-time transaction expenses, including sales charges (loads) and redemption fees, which are not shown in this section and would have resulted in higher total expenses. For more information, see your fund's prospectus or talk to your financial adviser.

Review your fund's expenses

The table below shows the expenses you would have paid on a \$1,000 investment in Dreyfus Midcap Index Fund, Inc. from November 1, 2017 to April 30, 2018. It also shows how much a \$1,000 investment would be worth at the close of the period, assuming actual returns and expenses.

Expenses and Value of a \$1,000 Investment

assuming actual returns for the six months ended April 30, 2018

	Investor Shares	Class I
Expenses paid per \$1,000 [†]	\$ 2.51	\$ 1.26
Ending value (after expenses)	\$ 1,025.60	\$ 1,026.90

COMPARING YOUR FUND'S EXPENSES WITH THOSE OF OTHER FUNDS (Unaudited)

Using the SEC's method to compare expenses

The Securities and Exchange Commission ("SEC") has established guidelines to help investors assess fund expenses. Per these guidelines, the table below shows your fund's expenses based on a \$1,000 investment, assuming a hypothetical 5% annualized return. You can use this information to compare the ongoing expenses (but not transaction expenses or total cost) of investing in the fund with those of other funds. All mutual fund shareholder reports will provide this information to help you make this comparison. Please note that you cannot use this information to estimate your actual ending account balance and expenses paid during the period.

Expenses and Value of a \$1,000 Investment

assuming a hypothetical 5% annualized return for the six months ended April 30, 2018

	Investor Shares	Class I
Expenses paid per \$1,000 [†]	\$ 2.51	\$ 1.25
Ending value (after expenses)	\$ 1,022.32	\$ 1,023.55

[†] Expenses are equal to the fund's annualized expense ratio of .50% for Investor shares and .25% for Class I, multiplied by the average account value over the period, multiplied by 181/365 (to reflect the one-half year period).

STATEMENT OF INVESTMENTS

April 30, 2018 (Unaudited)

Description	Shares	Value (\$)
Common Stocks - 99.3%		
Automobiles & Components - 1.2%		
Cooper Tire & Rubber Co.	107,109 ^a	2,618,815
Dana	300,073	7,120,732
Delphi Technologies	181,994	8,810,330
Gentex	567,340	12,901,312
Thor Industries	101,464	10,769,389
		42,220,578
Banks - 8.9%		
Associated Banc-Corp	350,052	9,258,875
BancorpSouth Bank	172,774 ^a	5,710,181
Bank of Hawaii	87,987 ^a	7,409,385
Bank of the Ozarks	251,384 ^a	11,764,771
Cathay General Bancorp	156,611	6,266,006
Chemical Financial	146,373 ^a	8,034,414
Commerce Bancshares	194,425 ^a	12,349,876
Cullen/Frost Bankers	119,955	13,728,850
East West Bancorp	298,981	19,918,114
First Horizon National	676,506	12,380,060
FNB	664,138 ^a	8,633,794
Fulton Financial	363,615	6,145,093
Hancock Holding	175,038	8,550,606
Home BancShares	327,433 ^a	7,609,543
International Bancshares	112,287	4,469,023
LendingTree	16,018 ^{a,b}	3,818,691
MB Financial	173,643 ^a	7,400,665
New York Community Bancorp	1,014,611	12,053,579
PacWest Bancorp	259,589	13,301,340
Pinnacle Financial Partners	151,898 ^a	9,729,067
Prosperity Bancshares	143,472 ^a	10,296,985
Signature Bank	111,072 ^b	14,122,805
Sterling Bancorp	465,356 ^a	11,052,205
Synovus Financial	245,302	12,821,936
TCF Financial	356,123	8,842,534
Texas Capital Bancshares	101,944 ^b	10,056,776
Trustmark	138,786 ^a	4,345,390
UMB Financial	90,895	6,960,739
Umpqua Holdings	452,919	10,670,772
United Bankshares	215,796 ^a	7,326,274
Valley National Bancorp	548,853 ^a	6,888,105
Washington Federal	181,191	5,752,814
Webster Financial	190,747 ^a	11,481,062

STATEMENT OF INVESTMENTS (Unaudited) (continued)

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Banks - 8.9% (continued)		
Wintrust Financial	116,446	10,416,095
		319,566,425
Capital Goods - 9.8%		
AECOM	329,529 ^{a,b}	11,348,979
AGCO	135,557	8,496,713
Carlisle Companies	127,141	13,696,900
Crane	104,149	8,711,022
Curtiss-Wright	91,404	11,703,368
Donaldson	268,929 ^a	11,902,798
Dycom Industries	64,676 ^{a,b}	6,717,249
EMCOR Group	121,126	8,913,662
EnerSys	86,376	5,921,939
Esterline Technologies	54,653 ^b	3,926,818
GATX	78,045 ^a	5,091,656
Graco	350,569	15,421,530
Granite Construction	81,331 ^a	4,260,118
Hubbell	113,213	11,758,302
IDEX	158,266	21,153,834
ITT	180,691	8,833,983
KBR	290,148 ^a	4,842,570
Kennametal	167,399	6,101,694
KLX	106,143 ^{a,b}	8,303,567
Lennox International	77,788 ^a	15,041,866
Lincoln Electric Holdings	126,833	10,510,651
MSC Industrial Direct, Cl. A	93,366	8,070,557
Nordson	105,572	13,576,559
NOW	217,747 ^{a,b}	2,641,271
Orbital ATK	119,579	15,829,868
Oshkosh	154,210	11,127,794
Regal Beloit	90,868	6,469,802
Teledyne Technologies	73,876 ^b	13,821,461
Terex	161,339	5,892,100
Timken	141,476	6,048,099
Toro	221,015 ^a	12,905,066
Trinity Industries	309,836 ^a	9,874,473
Valmont Industries	46,612	6,623,565
Wabtec	176,974 ^a	15,717,061
Watsco	66,257 ^a	11,092,747
Woodward	114,292 ^a	8,222,166
		350,571,808
Commercial & Professional Services - 2.7%		
Clean Harbors	105,887 ^b	4,849,625
Copart	417,407 ^{a,b}	21,321,150

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Commercial & Professional Services - 2.7% (continued)		
Deluxe	99,228 ^a	6,801,087
Dun & Bradstreet	75,957	8,758,602
Healthcare Services Group	151,210 ^a	5,841,242
Herman Miller	122,998	3,776,039
HNI	89,391 ^a	2,984,765
ManpowerGroup	136,886	13,102,728
MSA Safety	69,874	6,067,858
Pitney Bowes	383,419	3,918,542
Rollins	197,129 ^a	9,564,699
The Brink's Company	104,846	7,737,635
		94,723,972
Consumer Durables & Apparel - 3.0%		
Brunswick	179,949	10,775,346
Carter's	98,011 ^a	9,832,464
Deckers Outdoor	66,201 ^b	6,173,905
Helen of Troy	55,347 ^b	4,934,185
KB Home	174,353	4,629,072
NVR	7,055 ^b	21,870,500
Polaris Industries	121,365 ^a	12,721,479
Skechers USA, Cl. A	280,927 ^b	8,006,419
Tempur Sealy International	95,392 ^{a,b}	4,268,792
Toll Brothers	295,307	12,450,143
TRI Pointe Group	311,591 ^{a,b}	5,331,322
Tupperware Brands	104,972	4,677,552
		105,671,179
Consumer Services - 3.9%		
Adtalem Global Education	126,418 ^{a,b}	6,017,497
Boyd Gaming	170,039	5,646,995
Brinker International	98,334 ^a	4,286,379
Cheesecake Factory	87,586 ^a	4,550,093
Churchill Downs	23,554	6,467,928
Cracker Barrel Old Country Store	49,751 ^a	8,188,517
Domino's Pizza	90,445	21,863,270
Dunkin' Brands Group	171,591 ^a	10,460,187
Graham Holdings, Cl. B	9,523	5,742,845
ILG	217,191	7,412,729
International Speedway, Cl. A	52,156	2,143,612
Jack in the Box	61,322	5,500,583
Papa John's International	51,081 ^a	3,167,022
Scientific Games	109,592 ^{a,b}	5,841,254
Service Corporation International	384,388	14,034,006
Six Flags Entertainment	162,862 ^a	10,299,393
Sotheby's	77,212 ^b	4,076,794

STATEMENT OF INVESTMENTS (Unaudited) (continued)

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Consumer Services - 3.9% (continued)		
Texas Roadhouse	134,834	8,640,163
Wendy's	376,633	6,304,836
		140,644,103
Diversified Financials - 3.5%		
Eaton Vance	248,499	13,515,861
Evercore, Cl. A	85,011	8,607,364
FactSet Research Systems	80,738 ^a	15,268,363
Federated Investors, Cl. B	194,500	5,148,415
Interactive Brokers Group, Cl. A	148,044 ^a	10,984,865
Janus Henderson Group	373,387 ^a	11,795,295
Legg Mason	173,559	6,890,292
MarketAxess Holdings	77,757 ^a	15,444,873
SEI Investments	269,985	17,071,152
SLM	897,939 ^b	10,308,340
Stifel Financial	148,876	8,676,493
		123,711,313
Energy - 5.0%		
Callon Petroleum	419,031 ^{a,b}	5,828,721
Chesapeake Energy	1,887,203 ^{a,b}	5,604,993
CNX Resources	418,049 ^{a,b}	6,212,208
Core Laboratories	90,577 ^a	11,091,154
Diamond Offshore Drilling	131,335 ^{a,b}	2,415,251
Dril-Quip	78,261 ^{a,b}	3,243,918
Energen	201,193 ^b	13,166,070
EnSCO, Cl. A	894,858 ^a	5,055,948
Gulfport Energy	335,449 ^{a,b}	3,119,676
HollyFrontier	366,882	22,266,069
Matador Resources	199,918 ^{a,b}	6,545,315
Murphy Oil	333,073 ^a	10,028,828
Nabors Industries	643,091 ^a	4,893,922
Oasis Petroleum	478,723 ^b	5,280,315
Oceaneering International	200,876 ^a	4,266,606
Patterson-UTI Energy	456,413	9,776,366
PBF Energy, Cl. A	227,118	8,705,433
QEP Resources	494,464 ^{a,b}	6,022,572
Rowan Cos., Cl. A	236,120 ^b	3,409,573
SM Energy	208,550 ^a	4,994,772
Southwestern Energy	1,048,707 ^b	4,299,699
Superior Energy Services	316,503 ^b	3,396,077
Transocean	903,290 ^{a,b}	11,173,697
World Fuel Services	141,548	3,039,036
WPX Energy	824,450 ^b	14,089,850
		177,926,069

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Food & Staples Retailing - .5%		
Casey's General Stores	78,493 ^a	7,582,424
Sprouts Farmers Market	254,203 ^{a,b}	6,362,701
United Natural Foods	103,292 ^{a,b}	4,650,206
		18,595,331
Food, Beverage & Tobacco - 2.3%		
Boston Beer, Cl. A	18,081 ^{a,b}	4,052,856
Flowers Foods	382,067 ^a	8,638,535
Hain Celestial Group	213,334 ^b	6,214,419
Ingredion	149,409	18,091,936
Lamb Weston Holdings	302,364	19,750,416
Lancaster Colony	40,487 ^a	5,084,762
Post Holdings	135,691 ^{a,b}	10,796,933
Sanderson Farms	41,264	4,586,906
Tootsie Roll Industries	40,160 ^a	1,146,568
TreeHouse Foods	116,267 ^b	4,476,279
		82,839,610
Health Care Equipment & Services - 6.2%		
ABIOMED	86,975 ^b	26,175,126
Acadia Healthcare	168,000 ^{a,b}	5,977,440
Allscripts Healthcare Solutions	371,944 ^b	4,321,989
Cantel Medical	73,025	8,183,912
Encompass Health	202,636	12,324,322
Globus Medical, Cl. A	150,147 ^b	7,686,025
Halyard Health	96,304 ^b	4,561,920
Hill-Rom Holdings	136,994	11,758,195
ICU Medical	30,956 ^b	7,791,625
LifePoint Health	81,542 ^{a,b}	3,905,862
LivaNova	90,093 ^b	7,998,457
Masimo	98,420 ^b	8,831,227
Medidata Solutions	122,782 ^{a,b}	8,761,724
MEDNAX	194,226 ^b	8,916,916
Molina Healthcare	95,336 ^{a,b}	7,936,722
NuVasive	105,167 ^{a,b}	5,595,936
Patterson	169,721	3,951,105
STERIS	175,541	16,592,135
Teleflex	93,151	24,953,290
Tenet Healthcare	165,876 ^b	3,971,071
WellCare Health Plans	92,112 ^b	18,897,698
West Pharmaceutical Services	152,281	13,432,707
		222,525,404
Household & Personal Products - .6%		
Edgewell Personal Care	114,758 ^{a,b}	5,055,090
Energizer Holdings	122,654 ^a	7,035,433

STATEMENT OF INVESTMENTS (Unaudited) (continued)

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Household & Personal Products - .6% (continued)		
Nu Skin Enterprises, Cl. A	112,444	8,000,391
		20,090,914
Insurance - 4.5%		
Alleghany	31,833	18,293,470
American Financial Group	142,699	16,156,381
Aspen Insurance Holdings	122,783	5,212,138
Brown & Brown	474,694	12,925,918
CNO Financial Group	347,486	7,450,100
First American Financial	229,158	11,712,265
Genworth Financial, Cl. A	1,041,088 ^b	2,873,403
Hanover Insurance Group	88,013	10,108,293
Kemper	100,359 ^a	6,774,232
Mercury General	74,620 ^a	3,412,373
Old Republic International	518,839	10,584,316
Primerica	90,853	8,790,028
Reinsurance Group of America	133,356	19,923,386
RenaissanceRe Holdings	82,862	11,272,546
W.R. Berkley	198,694	14,814,625
		160,303,474
Materials - 7.1%		
Allegheny Technologies	260,700 ^{a,b}	6,926,799
AptarGroup	127,815 ^a	11,950,702
Ashland Global Holdings	128,927	8,532,389
Bemis	186,768	8,081,451
Cabot	127,816	7,139,802
Carpenter Technology	96,973 ^a	5,164,782
Chemours	383,008	18,541,417
Commercial Metals	239,940	5,041,139
Compass Minerals International	69,469 ^a	4,675,264
Domtar	128,161	5,626,268
Eagle Materials	99,845	9,880,661
Greif, Cl. A	54,064	3,163,825
Louisiana-Pacific	300,343	8,508,717
Minerals Technologies	73,255	5,058,258
NewMarket	18,892 ^a	7,170,459
Olin	343,309	10,364,499
Owens-Illinois	335,069 ^{a,b}	6,811,953
PolyOne	167,320	7,002,342
Reliance Steel & Aluminum	150,749	13,253,852
Royal Gold	135,502	12,032,578
RPM International	276,652 ^a	13,362,292
Scotts Miracle-Gro	82,655 ^a	6,908,305
Sensient Technologies	90,053 ^a	6,002,032

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Materials - 7.1% (continued)		
Silgan Holdings	153,170	4,299,482
Sonoco Products	204,269	10,491,256
Steel Dynamics	488,205	21,876,466
United States Steel	364,062 ^a	12,316,217
Valvoline	414,472 ^a	8,405,492
Worthington Industries	91,342	4,067,459
		252,656,158
Media - 1.5%		
AMC Networks, Cl. A	104,350 ^{a,b}	5,426,200
Cable One	9,727 ^a	6,177,812
Cinemark Holdings	219,632 ^a	8,602,985
John Wiley & Sons, Cl. A	91,317	6,022,356
Live Nation Entertainment	280,183 ^{a,b}	11,058,823
Meredith	81,372 ^a	4,215,070
New York Times, Cl. A	262,514 ^a	6,155,953
TEGNA	447,829	4,733,553
		52,392,752
Pharmaceuticals, Biotechnology & Life Sciences - 1.9%		
Akorn	195,512 ^b	2,821,238
Bio-Rad Laboratories, Cl. A	41,862 ^b	10,620,808
Bio-Techne	77,587	11,708,654
Catalent	273,936 ^b	11,261,509
Charles River Laboratories International	98,224 ^b	10,233,959
Endo International	406,367 ^b	2,328,483
Mallinckrodt	180,701 ^{a,b}	2,349,113
Prestige Brands Holdings	108,370 ^{a,b}	3,190,413
Syneos Health	117,133 ^{a,b}	4,462,767
United Therapeutics	88,788 ^b	9,776,447
		68,753,391
Real Estate - 8.9%		
Alexander & Baldwin	138,674 ^c	3,175,634
American Campus Communities	282,632 ^c	11,053,738
Camden Property Trust	191,715 ^c	16,372,461
CoreCivic	241,601 ^c	4,870,676
CoreSite Realty	71,000 ^{a,c}	7,391,100
Corporate Office Properties Trust	207,844 ^c	5,717,788
Cousins Properties	862,272 ^{a,c}	7,665,598
CyrusOne	199,083 ^c	10,668,858
DCT Industrial Trust	192,510 ^c	12,622,881
Douglas Emmett	329,968 ^c	12,297,907
Education Realty Trust	155,538 ^{a,c}	5,118,756
EPR Properties	132,663 ^{a,c}	7,299,118
First Industrial Realty Trust	246,829 ^c	7,678,850

STATEMENT OF INVESTMENTS (Unaudited) (continued)

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Real Estate - 8.9% (continued)		
GEO Group	254,428 ^c	5,724,630
Healthcare Realty Trust	256,402 ^c	7,135,668
Highwoods Properties	212,065 ^c	9,335,101
Hospitality Properties Trust	337,452 ^c	8,395,806
JBG SMITH Properties	193,417 ^{a,c}	7,131,285
Jones Lang LaSalle	93,945	15,924,617
Kilroy Realty	204,289 ^c	14,641,393
Lamar Advertising, Cl. A	173,597 ^c	11,059,865
LaSalle Hotel Properties	234,787 ^c	6,942,652
Liberty Property Trust	305,262 ^c	12,766,057
Life Storage	96,402 ^c	8,525,793
Mack-Cali Realty	187,864 ^c	3,225,625
Medical Properties Trust	748,751 ^{a,c}	9,569,038
National Retail Properties	318,562 ^{a,c}	12,118,098
Omega Healthcare Investors	411,199 ^{a,c}	10,682,950
PotlatchDeltic	123,453 ^c	6,401,038
Quality Care Properties	192,110 ^{a,b,c}	4,220,657
Rayonier	265,189 ^c	9,862,379
Sabra Health Care	365,883 ^{a,c}	6,699,318
Senior Housing Properties Trust	487,886 ^{a,c}	7,596,385
Tanger Factory Outlet Centers	196,155 ^{a,c}	4,305,602
Taubman Centers	125,118 ^c	7,004,106
Uniti Group	342,363 ^{a,c}	6,169,381
Urban Edge Properties	219,934 ^c	4,524,042
Weingarten Realty Investors	247,707 ^c	6,804,511
		318,699,362
Retailing - 2.6%		
Aaron's	128,982 ^a	5,387,578
American Eagle Outfitters	345,756	7,150,234
AutoNation	122,542 ^{a,b}	5,660,215
Bed Bath & Beyond	294,411 ^a	5,140,416
Big Lots	88,350 ^a	3,750,457
Dick's Sporting Goods	169,113 ^a	5,595,949
Dillard's, Cl. A	43,548 ^a	3,246,503
Five Below	104,453 ^b	7,375,426
GameStop, Cl. A	206,691 ^a	2,821,332
Murphy USA	67,009 ^b	4,192,753
Office Depot	1,057,006	2,420,544
Pool	83,624	11,607,847
Sally Beauty Holdings	258,320 ^{a,b}	4,466,353
Signet Jewelers	125,639	4,884,844
The Michaels Companies	229,763 ^b	4,278,187
Urban Outfitters	164,434 ^{a,b}	6,621,757

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Retailing - 2.6% (continued)		
Williams-Sonoma	159,117 ^a	7,605,793
		92,206,188
Semiconductors & Semiconductor Equipment - 3.1%		
Cirrus Logic	130,112 ^{a,b}	4,745,185
Cree	201,477 ^{a,b}	7,519,122
Cypress Semiconductor	734,867	10,714,361
First Solar	168,703 ^b	11,962,730
Integrated Device Technology	271,908 ^{a,b}	7,567,200
Microsemi	243,296 ^b	15,738,818
MKS Instruments	112,785	11,549,184
Monolithic Power Systems	80,304	9,403,598
Silicon Laboratories	88,165 ^b	8,190,528
Synaptics	70,488 ^{a,b}	3,067,638
Teradyne	404,240	13,158,012
Versum Materials	225,350	7,927,813
		111,544,189
Software & Services - 7.8%		
ACI Worldwide	241,488 ^b	5,614,596
Acxiom	162,604 ^{a,b}	4,224,452
Blackbaud	99,574 ^a	10,451,287
Broadridge Financial Solutions	241,183 ^a	25,857,229
Cars.com	146,112 ^a	4,161,270
CDK Global	261,640	17,069,394
CommVault Systems	88,966 ^b	6,223,172
Convergys	192,178	4,489,278
CoreLogic	168,704 ^b	8,350,848
Fair Isaac	62,280 ^b	10,785,650
Fortinet	298,742 ^b	16,538,357
j2 Global	101,758 ^a	8,077,550
Jack Henry & Associates	159,802 ^a	19,093,143
Leidos Holdings	294,466	18,913,551
LogMeIn	108,057 ^a	11,907,881
Manhattan Associates	139,067 ^{a,b}	5,988,225
MAXIMUS	133,906	9,056,063
PTC	240,523 ^b	19,807,069
Sabre	466,554 ^a	9,629,675
Science Applications International	89,462	7,674,945
Teradata	250,555 ^{a,b}	10,252,711
Tyler Technologies	72,933 ^{a,b}	15,966,492
Ultimate Software Group	60,102 ^{a,b}	14,419,672
WEX	82,830 ^b	13,411,834
		277,964,344

STATEMENT OF INVESTMENTS (Unaudited) (continued)

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Technology Hardware & Equipment - 6.1%		
3D Systems	231,721 ^{a,b}	2,326,479
ARRIS International	360,669 ^b	9,738,063
Arrow Electronics	180,383 ^b	13,481,825
Avnet	248,255	9,739,044
Belden	87,355	5,381,068
Ciena	299,160 ^b	7,703,370
Cognex	359,004	16,603,935
Coherent	51,407 ^b	8,647,686
Diebold Nixdorf	155,749 ^a	2,390,747
InterDigital	70,874	5,276,569
Jabil	361,669	9,620,395
Keysight Technologies	392,950 ^b	20,307,656
Knowles	183,467 ^{a,b}	2,348,378
Littelfuse	51,002 ^a	9,533,294
Lumentum Holdings	128,671 ^{a,b}	6,491,452
National Instruments	221,062 ^a	9,039,225
NCR	244,973 ^{a,b}	7,537,819
NetScout Systems	179,617 ^b	4,876,602
Plantronics	68,786 ^a	4,481,408
SYNNEX	60,092	6,019,416
Tech Data	72,052 ^b	5,493,965
Trimble	515,894 ^b	17,849,932
VeriFone Systems	228,628 ^b	5,260,730
ViaSat	113,532 ^{a,b}	7,263,777
Vishay Intertechnology	270,796	4,779,549
Zebra Technologies, Cl. A	110,179 ^b	14,855,435
		217,047,819
Telecommunication Services - .1%		
Telephone & Data Systems	190,017	5,193,165
Transportation - 2.4%		
Avis Budget Group	148,411 ^b	7,332,987
Genesee & Wyoming, Cl. A	127,159 ^b	9,053,721
JetBlue Airways	666,143 ^b	12,783,284
Kirby	110,472 ^{a,b}	9,423,262
Knight-Swift Transportation Holdings	265,596	10,360,900
Landstar System	86,210	8,763,246
Old Dominion Freight Line	141,404	18,928,339
Ryder System	109,672	7,395,183
Werner Enterprises	91,452 ^a	3,136,804
		87,177,726
Utilities - 5.7%		
ALLETE	105,433 ^a	8,056,135
Aqua America	367,941 ^a	12,933,126

Description	Shares	Value (\$)
Common Stocks - 99.3% (continued)		
Utilities - 5.7% (continued)		
Atmos Energy	229,496	19,940,907
Black Hills	109,906 ^a	6,229,472
Great Plains Energy	446,279	14,606,712
Hawaiian Electric Industries	225,602 ^a	7,826,133
IDACORP	103,464 ^a	9,622,152
MDU Resources Group	404,358	11,390,765
National Fuel Gas	176,140 ^a	9,044,789
New Jersey Resources	179,729 ^a	7,431,794
NorthWestern	101,364	5,568,938
OGE Energy	413,313	13,585,598
ONE Gas	107,241	7,476,843
PNM Resources	163,512 ^a	6,483,251
Southwest Gas Holdings	98,807 ^a	7,211,923
UGI	357,957	17,321,539
Vectren	171,941	12,082,294
Westar Energy	294,289	15,944,578
WGL Holdings	105,451	8,973,880
		201,730,829
Total Common Stocks (cost \$2,326,348,078)		3,544,756,103
	Principal Amount (\$)	
Short-Term Investments - .0%		
U.S. Treasury Bills		
1.64%, 6/7/18 (cost \$1,282,840)	1,285,000 ^{d,e}	1,282,842
	Current Yield (%)	Shares
Other Investment - .7%		
Registered Investment Company;		
Dreyfus Institutional Preferred Government Plus Money Market Fund (cost \$25,235,061)	1.71	25,235,061 ^f
		25,235,061

STATEMENT OF INVESTMENTS (Unaudited) (continued)

Description	Current Yield (%)	Shares	Value (\$)
Investment of Cash Collateral for Securities Loaned - 4.3%			
Registered Investment Company;			
Dreyfus Institutional Preferred Government Money Market Fund, Institutional Shares (cost \$152,449,359)	1.67	152,449,359 ^f	152,449,359
Total Investments (cost \$2,505,315,338)		104.3%	3,723,723,365
Liabilities, Less Cash and Receivables		(4.3%)	(151,817,400)
Net Assets		100.0%	3,571,905,965

^a Security, or portion thereof, on loan. At April 30, 2018, the value of the fund's securities on loan was \$634,837,907 and the value of the collateral held by the fund was \$657,654,348, consisting of cash collateral of \$152,449,359 and U.S. Government & Agency securities valued at \$505,204,989.

^b Non-income producing security.

^c Investment in real estate investment trust.

^d Held by a counterparty for open exchange traded derivative contracts.

^e Security is a discount security. Income is recognized through the accretion of discount.

^f Investment in affiliated money market mutual fund.

Portfolio Summary (Unaudited) †	Value (%)
Capital Goods	9.8
Banks	8.9
Real Estate	8.9
Software & Services	7.8
Materials	7.1
Health Care Equipment & Services	6.2
Technology Hardware & Equipment	6.1
Utilities	5.7
Short-Term/Money Market Investments	5.0
Energy	5.0
Insurance	4.5
Consumer Services	3.9
Diversified Financials	3.5
Semiconductors & Semiconductor Equipment	3.1
Consumer Durables & Apparel	3.0
Commercial & Professional Services	2.7
Retailing	2.6
Transportation	2.4
Food, Beverage & Tobacco	2.3
Pharmaceuticals, Biotechnology & Life Sciences	1.9
Media	1.5
Automobiles & Components	1.2
Household & Personal Products	.6
Food & Staples Retailing	.5
Telecommunication Services	.1
	104.3

† Based on net assets.

See notes to financial statements.

STATEMENT OF INVESTMENTS IN AFFILIATED ISSUERS
(Unaudited)

Registered Investment Companies	Value 10/31/17 (\$)	Purchases (\$)	Sales (\$)	Value 4/30/18 (\$)	Net Assets (%)	Dividends/ Distributions (\$)
Dreyfus Institutional Preferred Government Money Market Fund, Institutional Shares	290,603,440	482,232,099	620,386,180	152,449,359	4.3	-
Dreyfus Institutional Preferred Government Plus Money Market Fund	29,459,785	461,243,270	465,467,994	25,235,061	.7	200,184
Total	320,063,225	943,475,369	1,085,854,174	177,684,420	5.0	200,184

STATEMENT OF FUTURES

April 30, 2018 (Unaudited)

Description	Number of Contracts	Expiration	Notional Value (\$)	Value (\$)	Unrealized (Depreciation) (\$)
Futures Long					
E-mini Standard & Poor's Midcap	159	6/2018	30,419,176	29,766,390	(652,786)
Gross Unrealized Depreciation					(652,786)

See notes to financial statements.

STATEMENT OF ASSETS AND LIABILITIES

April 30, 2018 (Unaudited)

	Cost	Value
Assets (\$):		
Investments in securities—See Statement of Investments (including securities on loan, valued at \$634,837,907)—Note 1(b):		
Unaffiliated issuers	2,327,630,918	3,546,038,945
Affiliated issuers	177,684,420	177,684,420
Cash		6,753,945
Receivable for investment securities sold		2,473,062
Dividends and securities lending income receivable		1,864,331
Receivable for shares of Common Stock subscribed		361,721
Other assets		87,392
		3,735,263,816
Liabilities (\$):		
Due to The Dreyfus Corporation and affiliates—Note 3(b)		1,240,117
Liability for securities on loan—Note 1(b)		152,449,359
Payable for investment securities purchased		6,047,046
Payable for shares of Common Stock redeemed		3,232,822
Payable for futures variation margin—Note 4		382,339
Accrued expenses		6,168
		163,357,851
Net Assets (\$)		3,571,905,965
Composition of Net Assets (\$):		
Paid-in capital		2,239,409,529
Accumulated undistributed investment income—net		12,638,749
Accumulated net realized gain (loss) on investments		102,102,446
Accumulated net unrealized appreciation (depreciation) on investments [including (\$652,786) net unrealized (depreciation) on futures]		1,217,755,241
Net Assets (\$)		3,571,905,965
Net Asset Value Per Share		
	Investor Shares	Class I
Net Assets (\$)	2,523,685,161	1,048,220,804
Shares Outstanding	68,671,689	28,576,957
Net Asset Value Per Share (\$)	36.75	36.68

See notes to financial statements.

STATEMENT OF OPERATIONS
Six Months Ended April 30, 2018 (Unaudited)

Investment Income (\$):	
Income:	
Cash dividends (net of \$15,226 foreign taxes withheld at source):	
Unaffiliated issuers	31,207,806
Affiliated issuers	200,184
Income from securities lending—Note 1(b)	857,246
Interest	14,591
Total Income	32,279,827
Expenses:	
Management fee—Note 3(a)	4,644,074
Shareholder servicing costs—Note 3(b)	3,349,666
Directors' fees—Note 3(a,c)	158,693
Loan commitment fees—Note 2	39,407
Interest expense—Note 2	2,734
Total Expenses	8,194,574
Less—Directors' fees reimbursed by Dreyfus—Note 3(a)	(158,693)
Net Expenses	8,035,881
Investment Income—Net	24,243,946
Realized and Unrealized Gain (Loss) on Investments—Note 4 (\$):	
Net realized gain (loss) on investments	132,826,325
Net realized gain (loss) on futures	1,833,085
Net Realized Gain (Loss)	134,659,410
Net unrealized appreciation (depreciation) on investments	(54,601,904)
Net unrealized appreciation (depreciation) on futures	(902,685)
Net Unrealized Appreciation (Depreciation)	(55,504,589)
Net Realized and Unrealized Gain (Loss) on Investments	79,154,821
Net Increase in Net Assets Resulting from Operations	103,398,767

See notes to financial statements.

STATEMENT OF CHANGES IN NET ASSETS

	Six Months Ended April 30, 2018 (Unaudited)	Year Ended October 31, 2017
Operations (\$):		
Investment income—net	24,243,946	34,085,813
Net realized gain (loss) on investments	134,659,410	279,222,926
Net unrealized appreciation (depreciation) on investments	(55,504,589)	414,399,355
Net Increase (Decrease) in Net Assets Resulting from Operations	103,398,767	727,708,094
Distributions to Shareholders from (\$):		
Investment income—net:		
Investor Shares	(24,201,814)	(26,534,814)
Class I	(12,000,485)	(10,489,747)
Net realized gain on investments:		
Investor Shares	(202,832,375)	(235,966,422)
Class I	(78,220,151)	(72,401,716)
Total Distributions	(317,254,825)	(345,392,699)
Capital Stock Transactions (\$):		
Net proceeds from shares sold:		
Investor Shares	334,932,934	680,442,906
Class I	113,332,577	1,038,154,737
Distributions reinvested:		
Investor Shares	223,247,292	258,429,799
Class I	37,285,087	35,405,826
Cost of shares redeemed:		
Investor Shares	(594,770,387)	(1,748,731,327)
Class I	(63,958,611)	(108,005,014)
Increase (Decrease) in Net Assets from Capital Stock Transactions	50,068,892	155,696,927
Total Increase (Decrease) in Net Assets	(163,787,166)	538,012,322
Net Assets (\$):		
Beginning of Period	3,735,693,131	3,197,680,809
End of Period	3,571,905,965	3,735,693,131
Undistributed investment income—net	12,638,749	24,597,102
Capital Share Transactions (Shares):		
Investor Shares^a		
Shares sold	8,888,239	18,629,424
Shares issued for distributions reinvested	5,983,132	7,363,563
Shares redeemed	(15,669,746)	(47,279,387)
Net Increase (Decrease) in Shares Outstanding Class I^a	(798,375)	(21,286,400)
Shares sold	3,007,037	28,007,131
Shares issued for distributions reinvested	1,001,929	1,011,414
Shares redeemed	(1,697,295)	(2,920,059)
Net Increase (Decrease) in Shares Outstanding	2,311,671	26,098,486

^a During the period ended April 30, 2018, 10,963 Class I shares representing \$464,652 were exchanged for 10,979 Investor shares and during the period ended October 31, 2017, 39,687 Class I shares representing \$1,494,502 were exchanged for 39,654 Investor shares.

See notes to financial statements.

FINANCIAL HIGHLIGHTS

The following tables describe the performance for each share class for the fiscal periods indicated. All information (except portfolio turnover rate) reflects financial results for a single fund share. Total return shows how much your investment in the fund would have increased (or decreased) during each period, assuming you had reinvested all dividends and distributions. These figures have been derived from the fund's financial statements.

Investor Shares	Six Months Ended	Year Ended October 31,				
	April 30, 2018 (Unaudited)	2017	2016 ^a	2015	2014	2013
Per Share Data (\$):						
Net asset value, beginning of period	39.03	35.17	37.70	39.13	36.81	29.10
Investment Operations:						
Investment income—net ^b	.23	.32	.42	.39	.37	.35
Net realized and unrealized gain (loss) on investments	.81	7.30	1.45	.81	3.64	8.80
Total from Investment Operations	1.04	7.62	1.87	1.20	4.01	9.15
Distributions:						
Dividends from investment income—net	(.35)	(.38)	(.43)	(.40)	(.32)	(.34)
Dividends from net realized gain on investments	(2.97)	(3.38)	(3.97)	(2.23)	(1.37)	(1.10)
Total Distributions	(3.32)	(3.76)	(4.40)	(2.63)	(1.69)	(1.44)
Net asset value, end of period	36.75	39.03	35.17	37.70	39.13	36.81
Total Return (%)	2.56 ^c	22.89	5.79	2.98	11.21	32.84
Ratios/Supplemental Data (%)						
Ratio of total expenses to average net assets	.51 ^d	.51	.51	.51	.51	.51
Ratio of net expenses to average net assets	.50 ^d	.50	.50	.50	.50	.50
Ratio of net investment income to average net assets	1.24 ^d	.88	1.23	1.00	.98	1.07
Portfolio Turnover Rate	7.37 ^c	24.48	21.68	19.45	16.22	10.41
Net Assets, end of period (\$ x 1,000)	2,523,685	2,711,092	3,191,813	3,303,416	3,572,418	3,406,208

^a On August 31, 2016, the fund redesignated existing shares as Investor shares.

^b Based on average shares outstanding.

^c Not annualized.

^d Annualized.

See notes to financial statements.

Class I Shares	Six Months Ended	Year Ended October 31,	
	April 30, 2018 (Unaudited)	2017	2016 ^a
Per Share Data (\$):			
Net asset value, beginning of period	39.01	35.18	36.39
Investment Operations:			
Investment income—net ^b	.28	.42	.02
Net realized and unrealized gain (loss) on investments	.82	7.28	(1.23)
Total from Investment Operations	1.10	7.70	(1.21)
Distributions:			
Dividends from investment income—net	(.46)	(.49)	—
Dividends from net realized gain on investments	(2.97)	(3.38)	—
Total Distributions	(3.43)	(3.87)	—
Net asset value, end of period	36.68	39.01	35.18
Total Return (%)	2.69 ^c	23.17	(3.33) ^c
Ratios/Supplemental Data (%):			
Ratio of total expenses to average net assets	.26 ^d	.26	.26 ^d
Ratio of net expenses to average net assets	.25 ^d	.25	.25 ^d
Ratio of net investment income to average net assets	1.49 ^d	1.10	.70 ^d
Portfolio Turnover Rate	7.37 ^c	24.48	21.68
Net Assets, end of period (\$ x 1,000)	1,048,221	1,024,602	5,867

^a From August 31, 2016 (commencement of initial offering) to October 31, 2016.

^b Based on average shares outstanding.

^c Not annualized.

^d Annualized.

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS (Unaudited)

NOTE 1—Significant Accounting Policies:

Dreyfus Midcap Index Fund, Inc. (the “fund”) is registered under the Investment Company Act of 1940, as amended (the “Act”), as a non-diversified open-end management investment company. The fund’s investment objective is to seek to match the performance of the S&P’s MidCap 400® Index. The Dreyfus Corporation (the “Manager” or “Dreyfus”), a wholly-owned subsidiary of The Bank of New York Mellon Corporation (“BNY Mellon”), serves as the fund’s investment adviser.

MBSC Securities Corporation (the “Distributor”), a wholly-owned subsidiary of Dreyfus, is the distributor of the fund’s shares, which are sold without a sales charge. The fund is authorized to issue 300 million shares of \$.001 par value Common Stock. The fund currently has authorized two classes of shares: Investor shares (200 million shares authorized) and Class I (100 million shares authorized). Investor shares are sold primarily to retail investors through financial intermediaries and bear Shareholder Services Plan fees. Class I shares are sold at net asset value per share generally to institutional investors. Other differences between the classes include the services offered to and the expenses borne by each class, and certain voting rights. Income, expenses (other than expenses attributable to a specific class), and realized and unrealized gains or losses on investments are allocated to each class of shares based on its relative net assets.

The Financial Accounting Standards Board (“FASB”) Accounting Standards Codification is the exclusive reference of authoritative U.S. generally accepted accounting principles (“GAAP”) recognized by the FASB to be applied by nongovernmental entities. Rules and interpretive releases of the Securities and Exchange Commission (“SEC”) under authority of federal laws are also sources of authoritative GAAP for SEC registrants. The fund’s financial statements are prepared in accordance with GAAP, which may require the use of management estimates and assumptions. Actual results could differ from those estimates.

The fund enters into contracts that contain a variety of indemnifications. The fund’s maximum exposure under these arrangements is unknown. The fund does not anticipate recognizing any loss related to these arrangements.

(a) Portfolio valuation: The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (i.e., the exit price). GAAP establishes a fair value hierarchy that

prioritizes the inputs of valuation techniques used to measure fair value. This hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

Additionally, GAAP provides guidance on determining whether the volume and activity in a market has decreased significantly and whether such a decrease in activity results in transactions that are not orderly. GAAP requires enhanced disclosures around valuation inputs and techniques used during annual and interim periods.

Various inputs are used in determining the value of the fund's investments relating to fair value measurements. These inputs are summarized in the three broad levels listed below:

Level 1—unadjusted quoted prices in active markets for identical investments.

Level 2—other significant observable inputs (including quoted prices for similar investments, interest rates, prepayment speeds, credit risk, etc.).

Level 3—significant unobservable inputs (including the fund's own assumptions in determining the fair value of investments).

The inputs or methodology used for valuing securities are not necessarily an indication of the risk associated with investing in those securities.

Changes in valuation techniques may result in transfers in or out of an assigned level within the disclosure hierarchy. Valuation techniques used to value the fund's investments are as follows:

Investments in securities are valued at the last sales price on the securities exchange or national securities market on which such securities are primarily traded. Securities listed on the National Market System for which market quotations are available are valued at the official closing price or, if there is no official closing price that day, at the last sales price. For open short positions, asked prices are used for valuation purposes. Bid price is used when no asked price is available. Registered investment companies that are not traded on an exchange are valued at their net asset value. All of the preceding securities are generally categorized within Level 1 of the fair value hierarchy.

Securities not listed on an exchange or the national securities market, or securities for which there were no transactions, are valued at the average of the most recent bid and asked prices. U.S. Treasury Bills are valued at the mean price between quoted bid prices and asked prices by an independent

pricing service (the “Service”) approved by the fund’s Board of Directors (the “Board”). These securities are generally categorized within Level 2 of the fair value hierarchy.

The Service is engaged under the general supervision of the Board.

Fair valuing of securities may be determined with the assistance of a pricing service using calculations based on indices of domestic securities and other appropriate indicators, such as prices of relevant American Depository Receipts and futures. Utilizing these techniques may result in transfers between Level 1 and Level 2 of the fair value hierarchy.

When market quotations or official closing prices are not readily available, or are determined to not accurately reflect fair value, such as when the value of a security has been significantly affected by events after the close of the exchange or market on which the security is principally traded (for example, a foreign exchange or market), but before the fund calculates its net asset value, the fund may value these investments at fair value as determined in accordance with the procedures approved by the Board. Certain factors may be considered when fair valuing investments such as: fundamental analytical data, the nature and duration of restrictions on disposition, an evaluation of the forces that influence the market in which the securities are purchased and sold, and public trading in similar securities of the issuer or comparable issuers. These securities are either categorized within Level 2 or 3 of the fair value hierarchy depending on the relevant inputs used.

For restricted securities where observable inputs are limited, assumptions about market activity and risk are used and such securities are generally categorized within Level 3 of the fair value hierarchy.

Futures, which are traded on an exchange, are valued at the last sales price on the securities exchange on which such securities are primarily traded or at the last sales price on the national securities market on each business day and are generally categorized within Level 1 of the fair value hierarchy.

The following is a summary of the inputs used as of April 30, 2018 in valuing the fund’s investments:

	Level 1 - Unadjusted Quoted Prices	Level 2 - Other Significant Observable Inputs	Level 3 - Significant Unobservable Inputs	Total
Assets (\$)				
Investments in Securities:				
Equity Securities—				
Domestic				
Common Stocks†	3,508,732,706	-	-	3,508,732,706
Equity Securities—				
Foreign				
Common Stocks†	36,023,397	-	-	36,023,397
Registered				
Investment				
Companies	177,684,420	-	-	177,684,420
U.S. Treasury	-	1,282,842	-	1,282,842
Liabilities (\$)				
Other Financial Instruments:				
Futures††	(652,786)	-	-	(652,786)

[†] See Statement of Investments for additional detailed categorizations.

^{††} Amount shown represents unrealized (depreciation) at period end.

At April 30, 2018, there were no transfers between levels of the fair value hierarchy. It is the fund's policy to recognize transfers between levels at the end of the reporting period.

(b) Securities transactions and investment income: Securities transactions are recorded on a trade date basis. Realized gains and losses from securities transactions are recorded on the identified cost basis. Dividend income is recognized on the ex-dividend date and interest income, including, where applicable, accretion of discount and amortization of premium on investments, is recognized on the accrual basis.

Pursuant to a securities lending agreement with The Bank of New York Mellon, a subsidiary of BNY Mellon and an affiliate of Dreyfus, the fund may lend securities to qualified institutions. It is the fund's policy that, at origination, all loans are secured by collateral of at least 102% of the value of U.S. securities loaned and 105% of the value of foreign securities loaned. Collateral equivalent to at least 100% of the market value of securities on loan is maintained at all times. Collateral is either in the form of cash, which can be invested in certain money market mutual funds managed by Dreyfus, or U.S. Government and Agency securities. The fund is entitled to receive all dividends, interest and distributions on securities loaned, in addition to income earned as a result of the lending transaction. Should a borrower fail to return the securities in a timely manner, The Bank of New York Mellon is required to replace the securities for the

benefit of the fund or credit the fund with the market value of the unreturned securities and is subrogated to the fund's rights against the borrower and the collateral. Additionally, the contractual maturity of security lending transactions are on an overnight and continuous basis. During the period ended April 30, 2018, The Bank of New York Mellon earned \$166,448 from lending portfolio securities, pursuant to the securities lending agreement.

(c) Affiliated issuers: Investments in other investment companies advised by Dreyfus are defined as “affiliated” under the Act.

(d) Dividends and distributions to shareholders: Dividends and distributions are recorded on the ex-dividend date. Dividends from investment income-net and dividends from net realized capital gains, if any, are normally declared and paid annually, but the fund may make distributions on a more frequent basis to comply with the distribution requirements of the Internal Revenue Code of 1986, as amended (the “Code”). To the extent that net realized capital gains can be offset by capital loss carryovers, it is the policy of the fund not to distribute such gains. Income and capital gain distributions are determined in accordance with income tax regulations, which may differ from GAAP.

(e) Federal income taxes: It is the policy of the fund to continue to qualify as a regulated investment company, if such qualification is in the best interests of its shareholders, by complying with the applicable provisions of the Code, and to make distributions of taxable income sufficient to relieve it from substantially all federal income and excise taxes.

As of and during the period ended April 30, 2018, the fund did not have any liabilities for any uncertain tax positions. The fund recognizes interest and penalties, if any, related to uncertain tax positions as income tax expense in the Statement of Operations. During the period ended April 30, 2018, the fund did not incur any interest or penalties.

Each tax year in the three-year period ended October 31, 2017 remains subject to examination by the Internal Revenue Service and state taxing authorities.

The tax character of distributions paid to shareholders during the fiscal year ended October 31, 2017 was as follows: ordinary income \$37,024,561 and long-term capital gains \$308,368,138. The tax character of current year distributions will be determined at the end of the current fiscal year.

NOTE 2—Bank Lines of Credit:

The fund participates with other Dreyfus-managed funds in an \$830 million unsecured credit facility led by Citibank, N.A. and a \$300 million

unsecured credit facility provided by The Bank of New York Mellon (each, a “Facility”), each to be utilized primarily for temporary or emergency purposes, including the financing of redemptions. In connection therewith, the fund has agreed to pay its pro rata portion of commitment fees for each Facility. Interest is charged to the fund based on rates determined pursuant to the terms of the respective Facility at the time of borrowing.

The average amount of borrowings outstanding under the Facilities during the period ended April 30, 2018 was approximately \$222,100 with a related weighted average annualized interest rate of 2.48%.

NOTE 3—Management Fee and Other Transactions with Affiliates:

(a) Pursuant to a management agreement with Dreyfus, the management fee is computed at the annual rate of .25% of the value of the fund’s average daily net assets and is payable monthly. Out of its fee, Dreyfus pays all of the expenses of the fund except management fees, Shareholder Services Plan fees, brokerage fees and commissions, taxes, interest expense, commitment fees on borrowings, fees and expenses of the interested Directors (including counsel fees) and extraordinary expenses. In addition, Dreyfus is required to reduce its fee in an amount equal to the fund’s allocable portion of fees and expenses of the non-interested Directors (including counsel fees). During the period ended April 30, 2018, fees reimbursed by Dreyfus amounted to \$158,693.

(b) Under the Shareholder Services Plan, Investor shares pay the Distributor at an annual rate of .25% of the value of its average daily net assets for the provision of certain services. The services provided may include personal services relating to shareholder accounts, such as answering shareholder inquiries regarding the fund and providing reports and other information, and services related to the maintenance of shareholder accounts, such as recordkeeping and sub-accounting services. The Distributor may make payments to Service Agents (securities dealers, financial institutions or other industry professionals) with respect to these services. The Distributor determines the amounts to be paid to Service Agents. During the period ended April 30, 2018, the fund was charged \$3,349,666 pursuant to the Shareholder Services Plan.

The components of “Due to The Dreyfus Corporation and affiliates” in the Statement of Assets and Liabilities consist of: management fees \$739,392 and Shareholder Services Plan fees \$524,178, which are offset against an expense reimbursement currently in effect in the amount of \$23,453.

(c) Each Board member also serves as a Board member of other funds within the Dreyfus complex. Annual retainer fees and attendance fees are allocated to each fund based on net assets.

NOTE 4—Securities Transactions:

The aggregate amount of purchases and sales of investment securities, excluding short-term securities and futures, during the period ended April 30, 2018, amounted to \$270,989,823 and \$511,288,623, respectively.

Derivatives: A derivative is a financial instrument whose performance is derived from the performance of another asset. Each type of derivative instrument that was held by the fund during the period ended April 30, 2018 is discussed below.

Futures: In the normal course of pursuing its investment objective, the fund is exposed to market risk, including equity price risk, as a result of changes in value of underlying financial instruments. The fund invests in futures in order to manage its exposure to or protect against changes in the market. A futures contract represents a commitment for the future purchase or a sale of an asset at a specified date. Upon entering into such contracts, these investments require initial margin deposits with a counterparty, which consist of cash or cash equivalents. The amount of these deposits is determined by the exchange or Board of Trade on which the contract is traded and is subject to change. Accordingly, variation margin payments are received or made to reflect daily unrealized gains or losses which are recorded in the Statement of Operations. When the contracts are closed, the fund recognizes a realized gain or loss which is reflected in the Statement of Operations. There is minimal counterparty credit risk to the fund with futures since they are exchange traded, and the exchange guarantees the futures against default. Futures open at April 30, 2018 are set forth in the Statement of Futures.

The following summarizes the average market value of derivatives outstanding during the period ended April 30, 2018:

	Average Market Value (\$)
Equity futures	38,232,493

At April 30, 2018, accumulated net unrealized appreciation on investments inclusive of derivative contracts was \$1,217,755,241, consisting of \$1,377,617,670 gross unrealized appreciation and \$159,862,429 gross unrealized depreciation.

At April 30, 2018, the cost of investments inclusive of derivative contracts for federal income tax purposes was substantially the same as the cost for financial reporting purposes (see the Statement of Investments).

INFORMATION ABOUT THE RENEWAL OF THE FUND'S MANAGEMENT AGREEMENT (Unaudited)

At a meeting of the fund's Board of Directors held on February 14-15, 2018, the Board considered the renewal of the fund's Management Agreement pursuant to which Dreyfus provides the fund with investment advisory and administrative services (the "Agreement"). The Board members, none of whom are "interested persons" (as defined in the Investment Company Act of 1940, as amended) of the fund, were assisted in their review by independent legal counsel and met with counsel in executive session separate from Dreyfus representatives. In considering the renewal of the Agreement, the Board considered all factors that it believed to be relevant, including those discussed below. The Board did not identify any one factor as dispositive, and each Board member may have attributed different weights to the factors considered.

Analysis of Nature, Extent, and Quality of Services Provided to the Fund. The Board considered information provided to them at the meeting and in previous presentations from Dreyfus representatives regarding the nature, extent, and quality of the services provided to funds in the Dreyfus fund complex. Dreyfus provided the number of open accounts in the fund, the fund's asset size and the allocation of fund assets among distribution channels. Dreyfus also had previously provided information regarding the diverse intermediary relationships and distribution channels of funds in the Dreyfus fund complex (such as retail direct or intermediary, in which intermediaries typically are paid by the fund and/or Dreyfus) and Dreyfus' corresponding need for broad, deep, and diverse resources to be able to provide ongoing shareholder services to each intermediary or distribution channel, as applicable to the fund.

The Board also considered research support available to, and portfolio management capabilities of, the fund's portfolio management personnel and that Dreyfus also provides oversight of day-to-day fund operations, including fund accounting and administration and assistance in meeting legal and regulatory requirements. The Board also considered Dreyfus' extensive administrative, accounting and compliance infrastructures. The Board also considered portfolio management's brokerage policies and practices (including policies and practices regarding soft dollars) and the standards applied in seeking best execution.

Comparative Analysis of the Fund's Performance and Management Fee and Expense Ratio. The Board reviewed reports prepared by Broadridge Financial Solutions, Inc. ("Broadridge"), an independent provider of investment company data, which included information comparing (1) the fund's performance with the performance of a group of comparable funds (the "Performance Group") and with a broader group of funds (the "Performance Universe"), all for various periods ended December 31, 2017, and (2) the fund's actual and contractual management fees and total expenses with those of a group of comparable funds (the "Expense Group") and with a broader group of funds (the "Expense Universe"), the information for which was derived in part from fund financial statements available to Broadridge as of the date of its analysis. Dreyfus previously had furnished the Board with a description of the methodology Broadridge used to select the Performance Group and Performance Universe and the Expense Group and Expense Universe.

Dreyfus representatives stated that the usefulness of performance comparisons may be affected by a number of factors, including different investment limitations that may be applicable to the fund and comparison funds. The Board discussed with representatives of Dreyfus and/or its affiliates the results of the comparisons and considered that the fund's total return performance was at or above, or within one or two basis points of, the Performance Group median, and above the Performance Universe median, for all periods. Dreyfus also provided a comparison of the fund's calendar year total returns to the returns of the fund's benchmark index.

The Board also reviewed the range of actual and contractual management fees and total expenses of the Expense Group and Expense Universe funds and discussed the results of the comparisons. Taking into account the fund's "unitary" fee structure, the Board considered that: the fund's contractual management fee was above the Expense Group median, the fund's actual management fee was above the Expense Group and Expense Universe medians and the fund's total expenses were at the Expense Group median and above the Expense Universe median.

Dreyfus representatives reviewed with the Board the management or investment advisory fees (1) paid by funds advised or administered by Dreyfus that are in the same Lipper category as the fund and (2) paid to Dreyfus or the Dreyfus-affiliated primary employer of the fund's primary portfolio manager(s) for advising any separate accounts and/or other types of client portfolios that are considered to have similar investment strategies and policies as the fund (the "Similar Clients"), and explained the nature of the Similar Clients. They discussed differences in fees paid and the relationship of the fees paid in light of any differences in the services provided and other relevant factors, noting the fund's "unitary" fee structure. The Board considered the relevance of the fee information provided for the Similar Clients to evaluate the appropriateness of the fund's management fee.

Analysis of Profitability and Economies of Scale. Dreyfus representatives reviewed the expenses allocated and profit received by Dreyfus and its affiliates and the resulting profitability percentage for managing the fund and the aggregate profitability percentage to Dreyfus and its affiliates for managing the funds in the Dreyfus fund complex, and the method used to determine the expenses and profit. The Board concluded that the profitability results were not unreasonable, given the services rendered and service levels provided by Dreyfus. The Board also had been provided with information prepared by an independent consulting firm regarding Dreyfus' approach to allocating costs to, and determining the profitability of, individual funds and the entire Dreyfus fund complex. The consulting firm also had analyzed where any economies of scale might emerge in connection with the management of a fund.

The Board considered, on the advice of its counsel, the profitability analysis (1) as part of its evaluation of whether the fees under the Agreement, considered in relation to the mix of services provided by Dreyfus, including the nature, extent and quality of such services, supported the renewal of the Agreement and (2) in light of the relevant circumstances for the fund and the extent to which economies of scale would be realized if the fund grows and whether fee levels reflect these economies of scale for the

INFORMATION ABOUT THE RENEWAL OF THE FUND'S MANAGEMENT AGREEMENT (Unaudited) *(continued)*

benefit of fund shareholders. Dreyfus representatives also stated that, as a result of shared and allocated costs among funds in the Dreyfus fund complex, the extent of economies of scale could depend substantially on the level of assets in the complex as a whole, so that increases and decreases in complex-wide assets can affect potential economies of scale in a manner that is disproportionate to, or even in the opposite direction from, changes in the fund's asset level. The Board also considered potential benefits to Dreyfus from acting as investment adviser and took into consideration the soft dollar arrangements in effect for trading the fund's investments.

At the conclusion of these discussions, the Board agreed that it had been furnished with sufficient information to make an informed business decision with respect to the renewal of the Agreement. Based on the discussions and considerations as described above, the Board concluded and determined as follows.

- The Board concluded that the nature, extent and quality of the services provided by Dreyfus are adequate and appropriate.
- The Board was satisfied with the fund's performance.
- The Board concluded that the fee paid to Dreyfus continued to be appropriate under the circumstances and in light of the factors and the totality of the services provided as discussed above.
- The Board determined that the economies of scale which may accrue to Dreyfus and its affiliates in connection with the management of the fund had been adequately considered by Dreyfus in connection with the fee rate charged to the fund pursuant to the Agreement and that, to the extent in the future it were determined that material economies of scale had not been shared with the fund, the Board would seek to have those economies of scale shared with the fund.

In evaluating the Agreement, the Board considered these conclusions and determinations and also relied on its previous knowledge, gained through meetings and other interactions with Dreyfus and its affiliates, of Dreyfus and the services provided to the fund by Dreyfus. The Board also relied on information received on a routine and regular basis throughout the year relating to the operations of the fund and the investment management and other services provided under the Agreement, including information on the investment performance of the fund in comparison to similar mutual funds and benchmark performance indices; general market outlook as applicable to the fund; and compliance reports. In addition, the Board's consideration of the contractual fee arrangements for this fund had the benefit of a number of years of reviews of the Agreement for the fund, or substantially similar agreements for other Dreyfus funds that the Board oversees, during which lengthy discussions took place between the Board and Dreyfus representatives. Certain aspects of the arrangements may receive greater scrutiny in some years than in others, and the Board's conclusions may be based, in part, on their consideration of the fund's arrangements, or substantially similar arrangements for other Dreyfus funds that the Board oversees, in prior years. The Board determined to renew the Agreement.

NOTES

For More Information

Dreyfus Midcap Index Fund, Inc.

200 Park Avenue
New York, NY 10166

Manager

The Dreyfus Corporation
200 Park Avenue
New York, NY 10166

Custodian

The Bank of New York Mellon
225 Liberty Street
New York, NY 10286

Transfer Agent & Dividend Disbursing Agent

Dreyfus Transfer, Inc.
200 Park Avenue
New York, NY 10166

Distributor

MBSC Securities Corporation
200 Park Avenue
New York, NY 10166

Ticker Symbols: Investor: PESPX Class I: DMIDX

Telephone Call your financial representative or 1-800-DREYFUS

Mail The Dreyfus Family of Funds, 144 Glenn Curtiss Boulevard, Uniondale, NY 11556-0144

E-mail Send your request to info@dreyfus.com

Internet Information can be viewed online or downloaded at www.dreyfus.com

The fund files its complete schedule of portfolio holdings with the Securities and Exchange Commission (“SEC”) for the first and third quarters of each fiscal year on Form N-Q. The fund’s Forms N-Q are available on the SEC’s website at www.sec.gov and may be reviewed and copied at the SEC’s Public Reference Room in Washington, D.C. (phone 1-800-SEC-0330 for information).

A description of the policies and procedures that the fund uses to determine how to vote proxies relating to portfolio securities and information regarding how the fund voted these proxies for the most recent 12-month period ended June 30 is available at www.dreyfus.com and on the SEC’s website at www.sec.gov and without charge, upon request, by calling 1-800-DREYFUS.