

Dreyfus Midcap Index Fund, Inc.

ANNUAL REPORT October 31, 2005



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Dreyfus

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LETTER FROM THE CHAIRMAN

Dear Shareholder:

We are pleased to present this annual report for Dreyfus Midcap Index Fund, Inc., covering the 12-month period from November 1, 2004, through October 31, 2005. Inside, you'll find valuable information about how the fund was managed during the reporting period, including a discussion with the fund's portfolio manager, Tom Durante, CFA.

Over the past year, the U.S. economy once again demonstrated its fortitude, expanding at a steady pace despite the headwinds of soaring energy prices, higher short-term interest rates and the Gulf Coast hurricanes. However, after rallying in the final weeks of 2004, the U.S. stock market traded within a relatively narrow range for much of 2005, when investors responded cautiously to uncertainty regarding future business conditions. While small- and midcap stocks generally produced higher returns than large-cap equities for the reporting period, we recently have seen signs of renewed strength among larger companies compared to smaller ones, and higher-quality over lower-quality stocks.

As the end of 2005 approaches, some economists have suggested that the U.S. economy and financial markets may be reaching an inflection point. Investors' reactions to a change in leadership at the Federal Reserve Board, coupled with the potential effects of higher fuel prices on consumer spending, may set the tone for the financial markets in 2006. As always, we encourage you to talk to your financial advisor, who can discuss with you these issues and the potential benefits of a long-term investment perspective.

Thank you for your continued confidence and support.

Sincerely,

Stephen E. Canter
Chairman and Chief Executive Officer
The Dreyfus Corporation
November 15, 2005



DISCUSSION OF FUND PERFORMANCE

Tom Durante, CFA, Portfolio Manager

How did Dreyfus Midcap Index Fund, Inc. perform relative to its benchmark?

For the 12-month period ended October 31, 2005, Dreyfus Midcap Index Fund, Inc. produced a total return of 17.14%.¹ The Standard & Poor's MidCap 400 Index ("S&P 400 Index"), the fund's benchmark, produced a total return of 17.65% for the same period.^{2,3}

We attribute the market's performance to an expanding U.S. economy and rising corporate profits, which drove stock prices higher during the first half of the reporting period. Subsequently, however, the market's gains were tempered due to concerns regarding rising short-term interest rates and soaring energy prices. The difference in returns between the fund and the S&P 400 Index was primarily the result of transaction costs and other fund operating expenses.

What is the fund's investment approach?

The fund seeks to match the total return of the S&P 400 Index. To pursue that goal, the fund generally invests in all 400 stocks in the S&P 400 Index, in proportion to their weighting in the S&P 400 Index. The fund may also use stock index futures whose performance is tied to the S&P 400 Index as a substitute for the sale or purchase of stocks. Often considered a barometer for the midcap stock market in general, the S&P 400 Index is composed of 400 stocks of midsize domestic companies across 10 economic sectors. Each stock is weighted by its market capitalization; that is, larger companies have greater representation in the S&P 400 Index than smaller ones. The S&P 400 Index was the first benchmark to represent the performance of the midcap stock market.

As an index fund, the fund uses a passive management approach: all investment decisions are made based on the composition of the S&P 400 Index. The fund does not attempt to manage market volatility.

Compared to larger, more established companies, midsize companies are subject to more erratic market movements and may carry additional risks because, among other things, their revenues and earnings tend to be less predictable.

What other factors influenced the fund's performance?

When the reporting period began, U.S. economic growth was strong, fueled by low interest rates, strong consumer confidence and increased capital spending among businesses. By early 2005, however, investors became concerned that rising short-term interest rates and higher energy prices might constrain economic growth. In addition, inflation concerns surfaced when energy prices surged during the second half of the reporting period, especially in the weeks following hurricanes Katrina and Rita. In its ongoing effort to fight potential inflationary pressures, the Federal Reserve Board (the "Fed") raised short-term interest rates throughout the reporting period.

In this environment, midcap stocks generally produced higher returns than larger- and smaller-cap stocks, primarily because investors tended to favor smaller, faster-growing companies that have already met start-up challenges but still have room to grow. Some of the midcap market's stronger gains stemmed from the health care sector, where HMOs fared especially well. As more workers found employment in the recovering U.S. economy, HMO enrollment trends improved, boosting revenues. What's more, many HMOs benefited from mergers-and-acquisitions activity as well as productivity gains from improved technologies.

Construction companies, buoyed by a persistently strong U.S. housing market also posted robust results. While housing prices may have become overheated in some areas of the country, many construction companies are geographically diversified and also serve the more affordable housing markets in the United States. In addition, rebuilding following the Gulf Coast hurricanes greatly boosted demand for construction services.

Not surprisingly in an environment of sharply higher fuel prices, energy stocks also contributed positively to the S&P 400 Index's

performance, with some of the sector's stronger returns coming from oil services providers. Metals and mining stocks also gained value in an environment of higher commodity prices, with particularly strong returns posted by steel and coal companies.

On the other hand, media and publishing stocks generally languished during the reporting period, primarily due to a shift in advertising spending from traditional print media toward network television, cable television and the Internet. Automobile parts suppliers also suffered amid turmoil affecting their largest customers, the major U.S. automobile manufacturers.

What is the fund's current strategy?

As an index fund, our strategy is to attempt to replicate the return of the S&P 400 Index by investing in all 400 stocks that comprise the S&P 400 Index. Accordingly, as of October 31, 2005, the fund's assets were allocated in proportions that closely approximated each industry group's representation in the S&P 400 Index. In our view, an investment in a broadly diversified midcap index fund, such as Dreyfus Midcap Index Fund, Inc., may help investors in their efforts to manage the risks associated with midcap investing by limiting the impact on the overall portfolio of unexpected losses in any single industry group or holding.

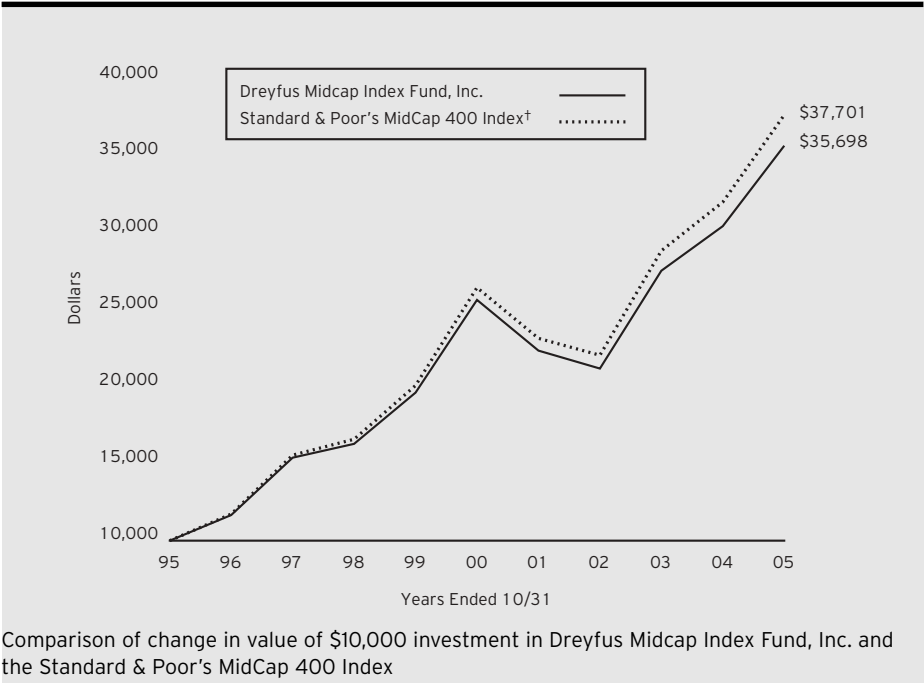
November 15, 2005

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. Return figure provided reflects the absorption of certain fund expenses by The Dreyfus Corporation pursuant to an agreement in effect that may be extended, terminated or modified. Had these expenses not been absorbed, the fund's return would have been lower.

² SOURCE: LIPPER INC. — Reflects reinvestment of dividends and, where applicable, capital gain distributions. The Standard & Poor's MidCap 400 Index is a widely accepted, unmanaged total return index measuring the performance of the midsize company segment of the U.S. market.

³ "Standard & Poor's®," "S&P®" and "Standard & Poor's MidCap 400 Index" are trademarks of The McGraw-Hill Companies, Inc., and have been licensed for use by the fund. The fund is not sponsored, endorsed, sold or promoted by Standard & Poor's and Standard & Poor's makes no representation regarding the advisability of investing in the fund.

FUND PERFORMANCE



Average Annual Total Returns <i>as of 10/31/05</i>			
	1 Year	5 Years	10 Years
Fund	17.14%	6.80%	13.57%

† Source: Lipper Inc.

Past performance is not predictive of future performance. The fund's performance shown in the graph and table does not reflect the deduction of taxes that a shareholder would pay on fund distributions or the redemption of fund shares.

The above graph compares a \$10,000 investment made in Dreyfus Midcap Index Fund, Inc. on 10/31/95 to a \$10,000 investment made in the Standard & Poor's MidCap 400 Index (the "Index") on that date. All dividends and capital gain distributions are reinvested.

The fund's performance shown in the line graph takes into account all applicable fees and expenses. The Index is a widely accepted, unmanaged total return index measuring the performance of the midsize company segment of the U.S. stock market and does not take into account charges, fees and other expenses. Further information relating to fund performance, including expense reimbursements, if applicable, is contained in the Financial Highlights section of the prospectus and elsewhere in this report.

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 May 1, 2005 to October 31, 2005. 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 October 31, 2005	
Expenses paid per \$1,000†	\$ 2.66
Ending value (after expenses)	\$1,111.10

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 October 31, 2005	
Expenses paid per \$1,000†	\$ 2.55
Ending value (after expenses)	\$1,022.68

† Expenses are equal to the fund's annualized expense ratio of .50%; multiplied by the average account value over the period, multiplied by 184/365 (to reflect the one-half year period).

STATEMENT OF INVESTMENTS

October 31, 2005

Common Stocks—98.9%	Shares	Value (\$)
Capital Equipment—.2%		
Ingram Micro, Cl. A	224,200 ^a	4,058,020
Commercial Banks—.2%		
Cathay General Bancorp	97,500	3,801,525
Computer Services—.1%		
SRA International, Cl. A	72,700 ^a	2,386,014
Consumer Cyclical—13.7%		
Abercrombie & Fitch, Cl. A	170,610	8,870,014
Advance Auto Parts	213,350 ^a	8,000,625
Aeropostale	107,985 ^a	2,110,026
Airtran Holdings	169,950 ^{a,b}	2,542,452
Alaska Air Group	53,037 ^a	1,672,256
American Eagle Outfitters	266,500	6,276,075
AnnTaylor Stores	141,940 ^{a,b}	3,444,883
Applebee's International	154,050	3,375,236
ArvinMeritor	136,838 ^b	2,193,513
Bandag	22,750	966,875
Barnes & Noble	106,890 ^b	3,865,142
BJ's Wholesale Club	132,854 ^{a,b}	3,783,682
Bob Evans Farms	68,894	1,543,915
Borders Group	136,945	2,688,230
BorgWarner	110,185	6,389,628
Boyd Gaming	84,650	3,491,813
Brinker International	171,466	6,536,284
Callaway Golf	127,895	1,822,504
Carmax	203,715 ^a	5,473,822
CBRL Group	91,225	3,165,508
CDW	122,400	6,897,240
Cheesecake Factory	152,725 ^a	5,241,522
Chico's FAS	352,110 ^a	13,922,429
Claire's Stores	193,464	5,039,737
Dollar Tree Stores	209,350 ^a	4,513,586
Fastenal	120,700 ^b	8,464,691
Federal Signal	94,063 ^b	1,525,702

Common Stocks (continued)**Consumer Cyclical (continued)**

	Shares	Value (\$)
Foot Locker	305,690 ^b	5,942,614
Furniture Brands International	101,985 ^b	1,851,028
Gentex	305,000	5,740,100
GTECH Holdings	243,625	7,757,020
Harman International Industries	128,440 ^b	12,826,018
Herman Miller	135,650	3,718,167
HNI	107,652 ^b	5,264,183
International Speedway, Cl. A	68,550 ^b	3,542,664
JetBlue Airways	182,550 ^{a,b}	3,397,256
Lear	130,845 ^b	3,985,539
Michaels Stores	263,980	8,732,458
Modine Manufacturing	68,070	2,250,394
Mohawk Industries	102,940 ^{a,b}	8,034,467
99 Cents Only Stores	93,495 ^a	902,227
O'Reilly Automotive	217,900 ^a	6,144,780
Outback Steakhouse	127,995	4,820,292
Pacific Sunwear of California	145,400 ^a	3,637,908
Payless Shoesource	132,990 ^a	2,443,026
Petsmart	279,200 ^b	6,561,200
Pier 1 Imports	167,905 ^b	1,732,780
Rent-A-Center	145,800 ^{a,b}	2,627,316
Ross Stores	284,700	7,698,288
Ruby Tuesday	124,195	2,721,112
Ruddick	67,280 ^a	1,480,833
Saks	276,670 ^b	5,021,561
Sotheby's Holdings, Cl. A	87,027 ^a	1,355,010
Thor Industries	67,285	2,195,510
Timberland, Cl. A	107,650 ^{a,b}	3,030,348
Urban Outfitters	214,600 ^a	6,079,618
Whole Foods Market	131,100 ^b	18,895,443
Williams-Sonoma	226,825 ^a	8,871,126
		283,077,676

Common Stocks (continued)	Shares	Value (\$)
Consumer Non-Durables--.3%		
Polo Ralph Lauren	117,700 ^b	5,790,840
Consumer Staples--2.1%		
Blyth	51,750 ^b	943,920
Church & Dwight	124,814	4,374,731
Dean Foods	291,358 ^{a,b}	10,532,592
Hormel Foods	142,235 ^b	4,523,073
JM Smucker	113,888	5,205,820
Lancaster Colony	50,049	2,006,464
PepsiAmericas	122,235	2,850,520
Sensient Technologies	92,078	1,628,860
Smithfield Foods	192,720 ^a	5,700,658
Tootsie Roll Industries	49,115	1,488,185
Tupperware	103,840 ^b	2,381,051
Universal	49,966	1,870,727
		43,506,601
Energy--3.8%		
Denbury Resources	111,300 ^a	4,856,019
ENSCO International	296,245	13,505,810
FMC Technologies	133,651 ^{a,b}	4,872,915
Forest Oil	106,335 ^a	4,644,713
Newfield Exploration	246,970 ^{a,b}	11,195,150
Noble Energy	340,324	13,629,976
Pioneer Natural Resources	276,525 ^b	13,840,076
Plains Exploration & Production	152,595 ^a	5,951,205
Pogo Producing	116,340	5,875,170
		78,371,034
Energy Equipment & Services--.1%		
Mine Safety Appliances	51,200	2,144,768
Forest & Paper Products--.1%		
Bowater	108,995	2,888,368
Health Care--11.7%		
Advanced Medical Optics	128,676 ^{a,b}	4,591,159
Apria Healthcare Group	96,500 ^a	2,226,255
Barr Pharmaceuticals	207,477 ^a	11,919,554
Beckman Coulter	120,764 ^b	5,948,835
Cephalon	113,200 ^a	5,160,788

Common Stocks (continued)

	Shares	Value (\$)
Health Care (continued)		
Charles River Laboratories International	139,900 a,b	6,122,024
Community Health Systems	174,815 a	6,487,384
Covance	121,490 a,b	5,910,488
Cytoc	218,750 a	5,545,313
Dentsply International	154,550	8,521,887
Edwards Lifesciences	116,585 a	4,824,287
Gen-Probe	98,800 a	4,034,992
Health Net	220,940 a	10,348,830
Henry Schein	169,900 a	6,734,836
Hillenbrand Industries	119,090 b	5,486,476
Inamed	70,800 a	5,033,880
Intuitive Surgical	68,100 a,b	6,042,513
Invitrogen	103,400 a,b	6,575,206
IVAX	419,257 a	11,969,787
LifePoint Hospitals	111,000 a	4,340,100
Lincare Holdings	191,350 a,b	7,816,648
Martek Biosciences	61,800 a,b	1,907,766
Millennium Pharmaceuticals	601,362 a,b	5,484,421
Omnicare	205,765	11,131,887
Pacificare Health Systems	170,822 a	14,068,900
Par Pharmaceutical Cos.	66,600 a	1,723,608
Perrigo	162,200 b	2,168,614
Protein Design Labs	208,750 a,b	5,849,175
Renal Care Group	132,740 a	6,218,869
Sepracor	205,300 a,b	11,548,125
STERIS	132,745	3,027,913
Techne	75,800 a,b	4,109,876
Triad Hospitals	167,647 a	6,895,321
Universal Health Services, Cl. B	108,635	5,121,054
Valeant Pharmaceuticals International	180,450	3,096,522
Varian	62,500 a	2,298,125
Varian Medical Systems	254,980 a,b	11,616,889
VCA Antech	160,800 a	4,148,640
Vertex Pharmaceuticals	186,450 a,b	4,241,738
		240,298,685

Common Stocks (continued)	Shares	Value (\$)
Homebuilding--.2%		
Beazer Homes USA	81,200 ^b	4,705,540
Insurance--.2%		
Mercury General	69,100 ^b	4,177,095
Interest Sensitive--18.2%		
AG Edwards	150,124 ^b	6,353,247
Allmerica Financial	104,185	3,969,448
AMB Property	165,950 ^b	7,331,671
American Financial Group/OH	90,354 ^b	3,088,299
AmeriCredit	271,845 ^{a,b}	6,075,735
AmerUs Group	75,760 ^b	4,478,931
Arthur J. Gallagher & Co.	184,355 ^b	5,423,724
Associated Banc-Corp	265,493	8,286,037
Astoria Financial	174,575	4,879,371
Bank of Hawaii	101,055	5,192,206
BISYS Group	235,425 ^a	2,985,189
Brown & Brown	107,840 ^b	5,858,947
Certegy	120,760	4,523,670
City National/Beverly Hills, CA	80,487	5,906,136
Colonial BancGroup	300,275	7,311,696
Commerce Bancorp/NJ	319,700 ^b	9,741,259
Cullen/Frost Bankers	89,030	4,702,565
Developers Diversified Realty	211,900	9,255,792
Eaton Vance	254,390 ^b	6,331,767
Everest Re Group	120,085	11,942,453
Fidelity National Financial	337,065	12,626,455
First American	185,505	8,128,829
FirstMerit	162,850	4,294,355
Greater Bay Bancorp	99,100 ^b	2,486,419
HCC Insurance Holdings	205,810	6,174,300
Highwoods Properties	104,730	2,954,433
Horace Mann Educators	83,700	1,624,617
Hospitality Properties Trust	140,140 ^b	5,563,558
Independence Community Bank	146,300	5,786,165
IndyMac Bancorp	123,790 ^b	4,621,081
Investors Financial Services	129,100 ^b	4,929,038
Jefferies Group	96,230 ^b	4,085,926
LaBranche & Co.	118,135 ^{a,b}	1,127,008

Common Stocks (continued)	Shares	Value (\$)
Interest Sensitive (continued)		
Legg Mason	219,085 ^b	23,510,011
Liberty Property Trust	171,050	7,131,075
Macerich	116,300 ^b	7,474,601
Mack-Cali Realty	120,485	5,138,685
Mercantile Bankshares	159,801	9,006,384
MoneyGram International	166,755	4,052,147
New Plan Excel Realty Trust	201,810	4,639,612
New York Community Bancorp	461,119	7,456,294
Ohio Casualty	125,635	3,427,323
Old Republic International	356,410	9,234,583
PMI Group	179,160	7,144,901
Protective Life	135,745	5,951,061
Radian Group	166,105 ^b	8,654,071
Raymond James Financial	110,895	3,773,757
Rayonier	147,474 ^b	5,637,913
Regency Centers	123,700 ^b	6,886,379
SEI Investments	125,000	4,850,000
Stancorp Financial Group	53,850	4,959,585
SVB Financial Group	69,125 ^a	3,436,204
TCF Financial	222,190 ^b	6,021,349
Texas Regional Bancshares, Cl. A	80,300	2,355,199
United Dominion Realty Trust	267,320	5,915,792
Unitrin	89,190	4,102,740
Waddell & Reed Financial, Cl. A	163,050	3,127,299
Washington Federal	169,118	3,888,023
Webster Financial	104,930 ^b	4,844,618
Weingarten Realty Investors	156,500	5,565,140
Westamerica Bancorporation	63,300	3,374,523
Wilmington Trust	132,040	5,005,636
WR Berkley	217,800 ^b	9,517,860
		374,123,092
Machinery--.4%		
Joy Global	157,900	7,242,873
Oil Refining/Distribution--.9%		
Questar	165,696 ^b	13,048,560
Western Gas Resources	111,995 ^b	4,849,384
		17,897,944

Common Stocks (continued)	Shares	Value (\$)
Oil Services—3.2%		
Cooper Cameron	109,085 a,b	8,042,837
FMC	73,200 a	3,985,008
Grant Prideco	247,648 a,b	9,631,031
Helmerich & Payne	100,285 b	5,555,789
Patterson-UTI Energy	334,600	11,419,898
Pride International	308,735 a	8,666,192
Smith International	413,870	13,409,388
Tidewater	118,290	5,436,608
		66,146,751
Producer Goods—14.6%		
AGCO	176,205 a	2,817,517
Airgas	129,795	3,669,304
Albemarle	74,500 b	2,614,205
Alexander & Baldwin	85,437 b	4,181,286
Alliant Techsystems	72,400 a,b	5,083,928
Arch Coal	124,300 b	9,579,801
Brink's	114,535	4,497,789
Cabot	120,840 b	4,121,852
Carlisle Cos.	59,782	3,986,861
CH Robinson Worldwide	333,600 b	11,762,736
Chemtura	462,603	4,949,852
CNF	102,085	5,744,322
Crane	96,900	3,000,024
Cytec Industries	77,200	3,188,360
Donaldson	133,966	4,186,438
Dycom Industries	78,100 a,b	1,556,533
Energizer Holdings	138,250 a	6,980,243
Expeditors International Washington	207,800 b	12,607,226
Ferro	81,649	1,456,618
Flowserve	107,750	3,771,250
GATX	97,496	3,643,426
Glatfelter	85,450	1,161,266
Graco	133,845	4,586,868
Granite Construction	64,187	2,189,419
Harsco	81,196	5,216,843
Hovnanian Enterprises, Cl. A	69,740 a,b	3,137,603
Hubbell, Cl. B	118,365	5,700,458

Common Stocks (continued)

	Shares	Value (\$)
Producer Goods (continued)		
Jacobs Engineering Group	112,727 ^a	7,186,346
JB Hunt Transport Services	246,900 ^b	4,792,329
Kennametal	74,850	3,825,584
Longview Fibre	99,586	1,872,217
Lubrizol	132,288	5,501,858
Lyondell Chemical	398,998 ^b	10,693,146
Martin Marietta Materials	90,280	7,123,995
MDU Resources Group	233,375 ^b	7,694,374
Minerals Technologies	39,550	2,114,343
Nordson	63,686	2,367,209
Olin	139,385	2,492,204
Overseas Shipholding Group	57,645	2,743,902
Packaging Corp. of America	122,115 ^b	2,477,713
Peabody Energy	255,580	19,976,133
Pentair	198,540 ^b	6,450,565
Potlatch	56,650	2,533,955
Precision Castparts	258,972	12,264,914
Quanta Services	229,880 ^{a,b}	2,641,321
RPM International	229,283	4,269,249
Ryland Group	91,400 ^b	6,151,220
Scotts Miracle-Gro, Cl. A	44,000 ^b	3,862,760
Sequa, Cl. A	12,486 ^a	770,386
Sonoco Products	192,883 ^b	5,458,589
SPX	142,595 ^b	6,134,437
Steel Dynamics	74,700	2,313,459
Swift Transportation	101,950 ^a	1,860,588
Tecumseh Products, Cl. A	36,050	725,687
Teleflex	79,575 ^b	5,267,069
Thomas & Betts	102,640 ^{a,b}	3,994,749
Toll Brothers	230,590 ^a	8,511,077
Trinity Industries	83,201 ^b	3,165,798
Valspar	197,360	4,351,788
Werner Enterprises	100,650	1,803,648
Worthington Industries	138,800	2,792,656
Yellow Roadway	112,900 ^a	5,131,305
York International	82,200	4,612,242
		301,320,843

Common Stocks (continued)	Shares	Value (\$)
Retail-.2%		
MSC Industrial Direct, Cl. A	104,200 b	3,978,356
Retail/Computers & Electronics-.2%		
GameStop, Cl. A	110,600 a,b	3,924,088
Semiconductors-.3%		
MEMC Electronic Materials	306,100 a,b	5,491,434
Services-9.1%		
Acxiom	152,400	3,252,216
Adesa	174,479	3,733,851
Alliance Data Systems	135,250 a,b	4,809,490
American Greetings, Cl. A	130,895 b	3,305,099
Banta	46,836	2,357,724
Belo, Cl. A	188,239	4,065,962
Career Education	200,600 a	7,139,354
Catalina Marketing	78,285 b	2,040,107
Ceridian	285,140 a	6,247,417
ChoicePoint	175,971 a	7,436,534
Cognizant Technology Solutions, Cl. A	266,200 a	11,707,476
Copart	135,400 a	3,167,006
Corinthian Colleges	177,900 a,b	2,213,076
Corporate Executive Board	77,700	6,421,128
CSG Systems International	95,650 a	2,248,731
Deluxe	98,700 b	3,289,671
DeVry	114,095 a,b	2,578,547
DST Systems	136,050 a,b	7,635,126
Dun & Bradstreet	130,940 a	8,291,121
Education Management	130,100 a	4,012,284
Emmis Communications, Cl. A	71,450 a,b	1,398,277
Entercom Communications	74,285 a	2,144,608
Fair Isaac	127,395 b	5,320,015
Gartner	111,830 a	1,346,433
Hanover Compressor	164,942 a	2,121,154
Harte-Hanks	113,380 b	2,902,528
ITT Educational Services	73,900 a	4,085,192
Jack Henry & Associates	146,450	2,633,171
Kelly Services, Cl. A	37,485	1,037,585
Korn/Ferry International	79,800 a	1,374,156
Laureate Education	96,800 a	4,781,920
Lee Enterprises	88,650	3,475,967

Common Stocks (continued)

	Shares	Value (\$)
Services (continued)		
Manpower	169,755	7,686,506
Media General, Cl. A	46,800	2,468,700
MPS Group	196,615 ^a	2,447,857
Reader's Digest Association	193,265	2,960,820
Regis	87,900	3,371,844
Republic Services	240,745	8,510,336
Rollins	57,523	1,094,087
Scholastic	68,450 ^a	2,228,048
Stericycle	86,600 ^a	4,984,696
Telephone and Data Systems	199,935 ^b	7,561,542
United Rentals	130,495 ^a	2,553,787
Valassis Communications	97,230 ^{a,b}	3,038,438
Washington Post, Cl. B	11,379	8,477,355
Westwood One	131,810 ^b	2,438,485
		188,395,427
Steel—.2%		
Timken	160,500	4,551,780
Technology—11.8%		
Activision	529,155 ^{a,b}	8,344,767
Adtran	131,300	3,971,825
Advent Software	30,950 ^a	950,784
Ametek	136,284	5,550,847
Amphenol, Cl. A	173,100	6,918,807
Anteon International	63,600 ^a	2,874,720
Arrow Electronics	230,682 ^a	6,807,425
Atmel	825,000 ^a	2,029,500
Avnet	283,383 ^{a,b}	6,531,978
Avocent	95,450 ^a	2,926,497
Cabot Microelectronics	47,862 ^{a,b}	1,407,142
Cadence Design Systems	541,690 ^{a,b}	8,656,206
Checkfree	176,600 ^a	7,505,500
CommScope	106,590 ^a	2,080,636
Credence Systems	193,800 ^a	1,492,260
Cree	147,300 ^{a,b}	3,541,092
Cypress Semiconductor	260,443 ^a	3,542,025
Diebold	137,096 ^b	4,954,649
Fairchild Semiconductor International	233,575 ^a	3,597,055
F5 Networks	74,900 ^{a,b}	3,897,047

Common Stocks (continued)	Shares	Value (\$)
Technology (continued)		
Harris	259,580 ^b	10,668,738
Imation	66,400	2,842,584
Integrated Device Technology	387,460 ^a	3,828,105
International Rectifier	137,690 ^{a,b}	4,074,247
Intersil, Cl. A	298,900 ^b	6,802,964
Kemet	168,850 ^a	1,168,442
Lam Research	265,950 ^a	8,973,153
Lattice Semiconductor	221,400 ^a	969,732
Macromedia	148,300 ^a	6,513,336
Macrovision	98,600 ^a	1,857,624
McAfee	322,305 ^a	9,678,819
McData, Cl. A	302,350 ^{a,b}	1,454,304
Mentor Graphics	154,259 ^a	1,275,722
Micrel	127,850 ^a	1,278,500
Microchip Technology	407,650	12,298,801
National Instruments	107,400	2,566,860
Newport	77,625 ^{a,b}	1,012,230
Plantronics	92,050	2,747,693
Plexus	84,650 ^a	1,495,766
Polycom	188,100 ^a	2,877,930
Powerwave Technologies	214,350 ^{a,b}	2,402,864
Reynolds & Reynolds, Cl. A	99,642	2,644,499
RF Micro Devices	367,000 ^a	1,923,080
RSA Security	138,250 ^a	1,576,050
SanDisk	354,200 ^{a,b}	20,858,838
Semtech	143,400 ^a	2,162,472
Silicon Laboratories	86,900 ^{a,b}	2,795,573
Sybase	176,260 ^a	3,921,785
Synopsys	281,200 ^a	5,328,740
Tech Data	112,800 ^a	3,907,392
3Com	753,900 ^a	2,902,515
Transaction Systems Architects	72,450 ^a	1,956,875
Triquint Semiconductor	272,638 ^a	1,145,080
Utstarcom	199,900 ^{a,b}	1,103,448
Vishay Intertechnology	358,849 ^a	4,069,348
Western Digital	414,900 ^a	5,020,290
Wind River Systems	146,050 ^a	1,913,255

Common Stocks (continued)		
	Shares	Value (\$)
Technology (continued)		
Zebra Technologies, Cl. A	140,595 ^{a,b}	6,061,050
		243,659,466
Utilities—5.1%		
Alliant Energy	226,949	6,002,801
Black Hills	63,792	2,651,833
Cincinnati Bell	479,650 ^a	1,899,414
DPL	247,530	6,378,848
Duquesne Light Holdings	151,545	2,529,286
Energy East	287,466	6,856,064
Great Plains Energy	145,475	4,176,587
Hawaiian Electric Industries	157,753	4,156,792
Idacorp	82,333	2,376,954
Leucadia National	159,992 ^b	6,873,256
Northeast Utilities	253,140	4,604,617
NSTAR	208,170	5,662,224
OGE Energy	175,951 ^b	4,532,498
Pepco Holdings	368,613	7,921,493
PNM Resources	133,931	3,395,151
Puget Energy	224,000	4,802,560
SCANA	221,179	8,774,171
Sierra Pacific Resources	357,436 ^a	4,628,796
Westar Energy	169,005	3,735,011
Wisconsin Energy	228,012	8,625,694
WPS Resources	74,000	4,037,440
		104,621,490
Utilities/Gas—2.0%		
AGL Resources	150,802	5,306,722
Aqua America	187,305 ^b	6,345,893
Aquila	727,420	2,575,067
Equitable Resources	236,680 ^b	9,147,682
National Fuel Gas	164,024	4,943,683
Oneok	196,715	5,653,589
Vectren	148,275	4,025,666
WGL Holdings	94,940	2,950,735
		40,949,037
Total Common Stocks		
(cost \$1,668,704,431)		2,037,508,747

STATEMENT OF INVESTMENTS *(continued)*

	Principal Amount (\$)	Value (\$)
Short-Term Investments–1.5%		
Repurchase Agreement–1.3%		
Greenwich Capital Markets, 3.92%, dated 10/31/2005, due 11/1/2005 in the amount of \$27,102,951 (fully collateralized by \$27,975,000 of Federal Home Loan Mortgage Corp., Notes, 4.75%–4.875%, due 3/15/2007–11/17/2015, value \$27,644,856)	27,100,000	27,100,000
U.S. Treasury Bill–.2%		
3.41%, 11/17/2005	3,000,000 ^c	2,995,350
Total Short-Term Investments (cost \$30,095,453)		30,095,350
Investment of Cash Collateral for Securities Loaned–6.6%		
	Shares	Value (\$)
Registered Investment Company;		
Dreyfus Institutional Cash Advantage Plus Fund (cost \$135,150,905)	135,150,905 ^d	135,150,905
Total Investments (cost \$1,833,950,789)	107.0%	2,202,755,002
Liabilities, Less Cash and Receivables	(7.0%)	(143,532,945)
Net Assets	100.0%	2,059,222,057

^a Non-income producing.^b All or a portion of these securities are on loan. At October 31, 2005, the total market value of the fund's securities on loan is \$141,166,428 and the total market value of the collateral held by the fund is \$143,988,694, consisting of cash collateral of \$135,150,905 and U.S. Government and agency securities valued at \$8,837,789.^c Partially held by a broker in a segregated account as collateral for open financial futures positions.^d Investment in affiliated money market mutual fund.Portfolio Summary[†]

	Value (%)		Value (%)
Interest Sensitive	18.2	Short-Term/	
Producer Goods	14.6	Money Market Investments	8.1
Consumer Cyclical	13.7	Utilities	5.1
Technology	11.8	Other	14.7
Health Care	11.7	Futures	(.0)
Services	9.1		107.0

[†] Based on net assets.

See notes to financial statements.

STATEMENT OF FINANCIAL FUTURES

October 31, 2005

	Contracts	Market Value Covered by Contracts (\$)	Expiration	Unrealized (Depreciation) at 10/31/2005 (\$)
Financial Futures Long				
Standard & Poor's Midcap 400	69	24,253,500	December 2005	(750,275)
Financial Futures Short				
Standard & Poor's Midcap 400 E-mini	39	2,741,700	December 2005	(4,670)
				(754,945)

See notes to financial statements.

STATEMENT OF ASSETS AND LIABILITIES

October 31, 2005

	Cost	Value
Assets (\$):		
Investments in securities—See Statement of Investments (including securities on loan, valued at \$141,166,428)—Note 1(b):		
Unaffiliated issuers	1,698,799,884	2,067,604,097
Affiliated issuers	135,150,905	135,150,905
Receivable for shares of Common Stock subscribed		2,529,710
Dividends and interest receivable		1,080,514
Receivable for investment securities sold		905,998
Receivable for futures variation margin—Note 4		476,052
		2,207,747,276
Liabilities (\$):		
Due to The Dreyfus Corporation and affiliates—Note 3(b)		863,114
Cash overdraft due to Custodian		4,130,919
Liability for securities on loan—Note 1(b)		135,150,905
Payable for investment securities purchased		6,447,377
Payable for shares of Common Stock redeemed		1,932,904
		148,525,219
Net Assets (\$)		2,059,222,057
Composition of Net Assets (\$):		
Paid-in capital		1,628,729,111
Accumulated undistributed investment income—net		16,496,531
Accumulated net realized gain (loss) on investments		45,947,147
Accumulated net unrealized appreciation (depreciation) on investments [including (\$754,945) net unrealized (depreciation) on financial futures]		368,049,268
Net Assets (\$)		2,059,222,057
Shares Outstanding		
(200 million shares of \$.001 par value Common Stock authorized)		74,041,956
Net Asset Value , offering and redemption price per share—Note 3(c) (\$)		27.81

See notes to financial statements.

STATEMENT OF OPERATIONS

Year Ended October 31, 2005

Investment Income (\$):

Income:

Cash dividends	26,112,136
Interest	1,038,401
Income from securities lending	1,586,215

Total Income	28,736,752
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Expenses:

Management fee—Note 3(a)	4,671,472
Shareholder servicing costs—Note 3(b)	4,671,472
Loan commitment fees—Note 2	10,779

Total Expenses	9,353,723
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Investment Income—Net	19,383,029
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Realized and Unrealized Gain (Loss) on Investments—Note 4 (\$):

Net realized gain (loss) on investments	75,017,508
Net realized gain (loss) on financial futures	6,265,663

Net Realized Gain (Loss)	81,283,171
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Net unrealized appreciation (depreciation) on investments [including (\$1,272,095) net unrealized (depreciation) on financial futures]	176,037,948
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Net Realized and Unrealized Gain (Loss) on Investments	257,321,119
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Net Increase in Net Assets Resulting from Operations	276,704,148
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See notes to financial statements.

STATEMENT OF CHANGES IN NET ASSETS

	Year Ended October 31,	
	2005	2004
Operations (\$):		
Investment income—net	19,383,029	9,374,814
Net realized gain (loss) on investments	81,283,171	45,347,313
Net unrealized appreciation (depreciation) on investments	176,037,948	70,881,888
Net Increase (Decrease) in Net Assets Resulting from Operations	276,704,148	125,604,015
Dividends to Shareholders from (\$):		
Investment income—net	(10,202,037)	(6,000,438)
Net realized gain on investments	(46,191,599)	(4,930,230)
Total Dividends	(56,393,636)	(10,930,668)
Capital Stock Transactions (\$):		
Net proceeds from shares sold	732,118,369	614,920,039
Dividends reinvested	52,208,923	9,820,722
Cost of shares redeemed	(471,676,098)	(332,883,845)
Increase (Decrease) in Net Assets from Capital Stock Transactions	312,651,194	291,856,916
Total Increase (Decrease) in Net Assets	532,961,706	406,530,263
Net Assets (\$):		
Beginning of Period	1,526,260,351	1,119,730,088
End of Period	2,059,222,057	1,526,260,351
Undistributed investment income—net	16,496,531	7,681,737
Capital Share Transactions (Shares):		
Shares sold	27,507,485	25,815,450
Shares issued for dividends reinvested	1,995,016	428,105
Shares redeemed	(17,629,539)	(14,022,746)
Net Increase (Decrease) in Shares Outstanding	11,872,962	12,220,809

See notes to financial statements.

FINANCIAL HIGHLIGHTS

The following table describes the performance for the fiscal periods indicated. 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.

	Year Ended October 31,				
	2005	2004	2003	2002	2001
Per Share Data (\$):					
Net asset value, beginning of period	24.55	22.42	17.66	19.31	25.76
Investment Operations:					
Investment income—net ^a	.28	.16	.13	.12	.16
Net realized and unrealized gain (loss) on investments	3.87	2.18	5.07	(1.04)	(3.02)
Total from Investment Operations	4.15	2.34	5.20	(.92)	(2.86)
Distributions:					
Dividends from investment income—net	(.16)	(.12)	(.12)	(.15)	(.21)
Dividends from net realized gain on investments	(.73)	(.09)	(.32)	(.58)	(3.38)
Total Distributions	(.89)	(.21)	(.44)	(.73)	(3.59)
Net asset value, end of period	27.81	24.55	22.42	17.66	19.31
Total Return (%)	17.14	10.50	30.05	(5.30)	(12.85)
Ratios/Supplemental Data (%):					
Ratio of total expenses to average net assets	.50	.50	.51	.50	.50
Ratio of net investment income to average net assets	1.04	.68	.69	.61	.72
Portfolio Turnover Rate	19.54	14.13	12.12	19.09	28.34
Net Assets, end of period (\$ x 1,000)	2,059,222	1,526,260	1,119,730	703,536	545,881

^a Based on average shares outstanding at each month end.

See notes to financial statements.

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 match the performance of the Standard & Poor’s Midcap 400 Index. The Dreyfus Corporation (the “Manager”) serves as the fund’s investment adviser. The Manager is a wholly-owned subsidiary of subsidiary of Mellon Financial Corporation (“Mellon Financial”). Dreyfus Service Corporation (the “Distributor”), a wholly-owned subsidiary of the Manager, is the Distributor of the fund’s shares, which are sold to the public without a sales charge.

The fund’s financial statements are prepared in accordance with U.S. generally accepted accounting principles, 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: 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 sale price. 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, except for open short positions, where the asked price is used for valuation purposes. Bid price is used when no asked price is available. Investments in registered investment companies are valued at their net asset value. When market quotations or official closing prices are not readily available, or are determined not to reflect accurately 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 of Directors. 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 ADR's and futures contracts. For other securities that are fair valued by the Board of Directors, certain factors may be considered 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. Financial futures are valued at the last sales price.

(b) Securities transactions and investment income: Securities transactions are recorded on a trade date basis. Realized gain and loss 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 Mellon Bank, N.A., an affiliate of the Manager, the fund may lend securities to qualified institutions. At originations, 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 will be maintained at all times. Cash collateral is invested in certain money market mutual funds managed by the Manager. The fund will be entitled to receive all income on securities loaned, in addition to income earned as a result of the lending transaction. Although each security loaned is fully collateralized, the fund would bear the risk of delay in recovery of, or loss of rights in, the securities loaned should a borrower fail to return the securities in a timely manner.

The fund may enter into repurchase agreements with financial institutions, deemed to be creditworthy by the Manager, subject to the seller's agreement to repurchase and the fund's agreement to resell such securities at a mutually agreed upon price. Securities purchased subject to repurchase agreements are deposited with the fund's custodian and, pursuant to the terms of the repurchase agreement, must have an aggregate market value greater than or equal to the repurchase price plus accrued interest at all times. If the value of the underlying securities falls below the value of the repurchase price plus accrued interest, the fund will require the seller to deposit additional collateral by the next business day. If the request for additional collateral is not met, or the seller defaults on its repurchase obligation, the fund maintains the right to sell the underlying securities at market value and may claim any resulting loss against the seller.

(c) Affiliated issuers: Investments in other investment companies advised by the Manager are defined as "affiliated" in the Act.

(d) Dividends to shareholders: Dividends are recorded on the ex-dividend date. Dividends from investment income-net and dividends from net realized capital gain, 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 gain can be offset by capital loss carryovers, if any, it is the policy of the fund not to distribute such gain. Income and capital gain distributions are determined in accordance with income tax regulations, which may differ from U.S. generally accepted accounting principles.

(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.

At October 31, 2005, the components of accumulated earnings on a tax basis were as follows: undistributed ordinary income \$24,227,456, undistributed capital gains \$78,078,659 and unrealized appreciation \$328,186,831.

The tax character of distributions paid to shareholders during the fiscal periods ended October 31, 2005 and October 31, 2004, respectively, were as follows: ordinary income \$16,244,879 and \$8,604,897 and long-term capital gains \$40,148,757 and \$2,325,771.

During the period ended October 31, 2005, as a result of permanent book to tax differences, primarily due to the tax treatment for real estate investment trusts, the fund decreased accumulated undistributed investment income-net by \$366,198 and increased net realized gain (loss) on investments by the same amount. Net assets were not affected by this reclassification.

NOTE 2—Bank Line of Credit:

The fund participates with other Dreyfus-managed funds in a \$350 million redemption credit facility (the “Facility”) to be utilized for temporary or emergency purposes, including the financing of redemptions. In connection therewith, the fund has agreed to pay commitment fees on its pro rata portion of the Facility. Interest is charged to the fund based on prevailing market rates in effect at the time of borrowing. During the period ended October 31, 2005, the fund did not borrow under the Facility.

NOTE 3—Management Fee and Other Transactions With Affiliates:

(a) Pursuant to a management agreement (“Agreement”) with the Manager, 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. Under the terms of the Agreement, the Manager has agreed

to pay all of the fund's expenses, except management fees, brokerage commissions, taxes, commitment fees, interest, fees and expenses of non-interested Board members (including counsel fees), Shareholder Services Plan fees and extraordinary expenses. In addition, the Manager is required to reduce its fee in an amount equal to the fees and expenses of the non-interested Board members (including counsel fees). Effective September 27, 2005, each Board member receives an annual fee of \$40,000, an attendance fee of \$5,000 for each in-person meeting and \$500 for telephone meetings. Prior to September 27, 2005, each Board member also serves as a Board member of other funds within the Dreyfus complex (collectively, the "Fund Group"). Each Board member receives an annual fee of \$25,000 and a fee of \$4,000 for each meeting attended and \$500 for telephone meetings. These fees are allocated among the funds in the Fund Group. The Chairman of the Board receives an additional 25% of such compensation. Subject to the fund's Emeritus Program Guidelines, Emeritus Board members, if any, receive 50% of the fund's annual retainer fee and per meeting fee paid at the time the Board member achieves emeritus status. Amounts required to be paid by the fund directly to the non-interested Board members, that would be applied to offset a portion of the management fee payable to the Manager, are in fact paid directly by the Manager to the non-interested Board members.

(b) Under the Shareholder Services Plan, the fund pays the Distributor for the provision of certain services at the annual rate of .25% of the value of the fund's average daily net assets. 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. The Distributor may make payments to Service Agents (a securities dealer, financial institution or other industry professional) in respect of these services. The Distributor determines the amounts to be paid to Service Agents. During the period ended October 31, 2005, the fund was charged \$4,671,472 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 \$431,557 and shareholder services plan fees \$431,557.

(c) A 1% redemption fee is charged and retained by the fund on certain shares redeemed within six months following the date of issuance, including redemptions made through the use of the fund's exchange privilege. During the period ended October 31, 2005, redemption fees charged and retained by the fund amounted to \$261.

NOTE 4—Securities Transactions:

The aggregate amount of purchases and sales of investment securities, excluding short-term securities and financial futures, during the period ended October 31, 2005, amounted to \$649,285,112 and \$358,279,150, respectively.

The fund may invest in financial futures contracts in order to gain exposure to or protect against changes in the market. The fund is exposed to market risk as a result of changes in the value of the underlying financial instruments. Investments in financial futures require the fund to “mark to market” on a daily basis, which reflects the change in the market value of the contract at the close of each day's trading. Accordingly, variation margin payments are received or made to reflect daily unrealized gains or losses. When the contracts are closed, the fund recognizes a realized gain or loss. These investments require initial margin deposits with a broker, 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. Contracts open at October 31, 2005, are set forth in the Statement of Financial Futures.

At October 31, 2005, the cost of investments for federal income tax purposes was \$1,874,568,171; accordingly, accumulated net unrealized appreciation on investments was \$328,186,831, consisting of \$475,230,691 gross unrealized appreciation and \$147,043,860 gross unrealized depreciation.

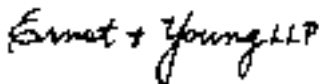
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Directors Dreyfus Midcap Index Fund, Inc.

We have audited the accompanying statement of assets and liabilities of Dreyfus Midcap Index Fund, Inc., including the statements of investments and financial futures, as of October 31, 2005 and the related statement of operations for the year then ended, the statement of changes in net assets for each of the two years in the period then ended and financial highlights for each of the years indicated therein. These financial statements and financial highlights are the responsibility of the Fund's management. Our responsibility is to express an opinion on these financial statements and financial highlights based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and financial highlights are free of material misstatement. We were not engaged to perform an audit of the Fund's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Fund's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements and financial highlights, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our procedures included verification by examination of securities held by the custodian as of October 31, 2005 and confirmation of securities not held by the custodian by correspondence with others. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements and financial highlights referred to above present fairly, in all material respects, the financial position of Dreyfus Midcap Index Fund, Inc. at October 31, 2005, the results of its operations for the year then ended, the changes in its net assets for each of the two years in the period then ended, and the financial highlights for each of the indicated years, in conformity with U.S. generally accepted accounting principles.

A handwritten signature in black ink that reads "Ernst & Young LLP". The signature is written in a cursive, flowing style.

New York, New York
December 8, 2005

IMPORTANT TAX INFORMATION (Unaudited)

For federal tax purposes, the fund hereby designates \$.6328 per share as a long-term capital gain distribution of the \$.8898 per share paid on December 29, 2004 and also designates \$.0021 per share as a long-term capital gain distribution paid on March 31, 2005.

The fund also hereby designates 97.88% of the ordinary dividends paid during the fiscal year ended October 31, 2005 as qualifying for the corporate dividends received deduction. For the fiscal year ended October 31, 2005 certain dividends paid by the fund may be subject to a maximum tax rate of 15%, as provided for by the Jobs and Growth Tax Relief Reconciliation Act of 2003. Of the distributions paid during the fiscal year, \$8,172,408 represents the maximum amount that may be considered qualified dividend income. Shareholders will receive notification in January 2006 of the percentage applicable to the preparation of their 2005 income tax returns.

BOARD MEMBERS INFORMATION (Unaudited)

Joseph S. DiMartino (62)
Chairman of the Board (2002)

Principal Occupation During Past 5 Years:

- Corporate Director and Trustee

Other Board Memberships and Affiliations:

- The Muscular Dystrophy Association, Director
- Levcor International, Inc., an apparel fabric processor, Director
- Century Business Services, Inc., a provider of outsourcing functions for small and medium size companies, Director
- The Newark Group, a provider of a national market of paper recovery facilities, paperboard mills and paperboard converting plants, Director
- Azimuth Trust, an institutional asset management firm, Member of Board of Managers and Advisory Board
- Sunair Services Corporation, engages in the design, manufacture and sale of high frequency systems for long-range voice and data communications, as well as providing certain outdoor-related services to homes and businesses, Director

No. of Portfolios for which Board Member Serves: 193

David P. Feldman (65)
Board Member (1991)

Principal Occupation During Past 5 Years:

- Corporate Director & Trustee

Other Board Memberships and Affiliations:

- BBH Mutual Funds Group (11 funds), Director
- The Jeffrey Company, a private investment company, Director
- QMED, a medical device company, Director

No. of Portfolios for which Board Member Serves: 58

Ehud Houminer (65)
Board Member (1996)

Principal Occupation During Past 5 Years:

- Executive-in-Residence at the Columbia Business School, Columbia University
- Principal of Lear, Yavitz and Associates, a management consulting firm (1996 to 2001)

Other Board Memberships and Affiliations:

- Avnet Inc., an electronics distributor, Director
- International Advisory Board to the MBA Program School of Management, Ben Gurion University, Chairman
- Explore Charter School, Brooklyn, NY, Chairman

No. of Portfolios for which Board Member Serves: 36

Gloria Messinger (75)
Board Member (1996)

Principal Occupation During Past 5 Years:

- Arbitrator for American Arbitration Association and National Association of Securities Dealers, Inc.
- Consultant in Intellectual Property

Other Board Memberships and Affiliations:

- Yale Law School Fund, Director
- Theater for a New Audience, Inc., Director
- Brooklyn Philharmonic, Director
- New York Women's Agenda Music Performance Trust Fund, Director

No. of Portfolios for which Board Member Serves: 25

T. John Szarkowski (79)
Board Member (1991)

Principal Occupation During Past 5 Years:

- Consultant in Photography

Other Board Memberships and Affiliations:

- Photography Department at The Museum of Modern Art, Director Emeritus

No. of Portfolios for which Board Member Serves: 25

Anne Wexler (75)
Board Member (1991)

Principal Occupation During Past 5 Years:

- Chairman of the Wexler & Walker Public Policy Associates, consultants specializing in government relations and public affairs

Other Board Memberships and Affiliations:

- Wilshire Mutual Funds (5 funds), Director
- Methanex Corporation, a methanol producing company, Director
- Member of the Council of Foreign Relations
- Member of the National Park Foundation

No. of Portfolios for which Board Member Serves: 36

Once elected all Board Members serve for an indefinite term. The address of the Board Members and Officers is in c/o The Dreyfus Corporation, 200 Park Avenue, New York, New York 10166. Additional information about the Board Members is available in the fund's Statement of Additional Information which can be obtained from Dreyfus free of charge by calling this toll free number: 1-800-554-4611.

John M. Fraser, Jr., Emeritus Board Member

OFFICERS OF THE FUND (Unaudited)

STEPHEN E. CANTER, President since March 2000.

Chairman of the Board, Chief Executive Officer and Chief Operating Officer of the Manager, and an officer of 90 investment companies (comprised of 184 portfolios) managed by the Manager. Mr. Canter also is a Board member and, where applicable, an Executive Committee Member of the other investment management subsidiaries of Mellon Financial Corporation, each of which is an affiliate of the Manager. He is 60 years old and has been an employee of the Manager since May 1995.

STEPHEN R. BYERS, Executive Vice President since November 2002.

Chief Investment Officer, Vice Chairman and a director of the Manager, and an officer of 90 investment companies (comprised of 184 portfolios) managed by the Manager. Mr. Byers also is an officer, director or an Executive Committee Member of certain other investment management subsidiaries of Mellon Financial Corporation, each of which is an affiliate of the Manager. He is 52 years old and has been an employee of the Manager since January 2000.

MARK N. JACOBS, Vice President since March 2000.

Executive Vice President, Secretary and General Counsel of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 59 years old and has been an employee of the Manager since June 1977.

MICHAEL A. ROSENBERG, Vice President and Secretary since August 2005.

Associate General Counsel of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 45 years old and has been an employee of the Manager since October 1991.

JAMES BITETTO, Vice President and Assistant Secretary since August 2005.

Assistant General Counsel and Assistant Secretary of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 39 years old and has been an employee of the Manager since December 1996.

JONI LACKS CHARATAN, Vice President and Assistant Secretary since August 2005.

Associate General Counsel of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. She is 49 years old and has been an employee of the Manager since October 1988.

JOSEPH M. CHIOFFI, Vice President and Assistant Secretary since August 2005.

Assistant General Counsel of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 43 years old and has been an employee of the Manager since June 2000.

JANETTE E. FARRAGHER, Vice President and Assistant Secretary since August 2005.

Associate General Counsel of the Manager and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. She is 42 years old and has been an employee of the Manager since February 1984.

JOHN B. HAMMALIAN, Vice President and Assistant Secretary since August 2005.

Associate General Counsel of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 42 years old and has been an employee of the Manager since February 1991.

ROBERT R. MULLERY, Vice President and Assistant Secretary since August 2005.

Associate General Counsel of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 53 years old and has been an employee of the Manager since May 1986.

JEFF PRUSNOFSKY, Vice President and Assistant Secretary since August 2005.

Associate General Counsel of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 40 years old and has been an employee of the Manager since October 1990.

JAMES WINDELS, Treasurer since November 2001.

Director – Mutual Fund Accounting of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 46 years old and has been an employee of the Manager since April 1985.

ERIK D. NAVILOFF, Assistant Treasurer since August 2005.

Senior Accounting Manager – Taxable Fixed Income Funds of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 37 years old and has been an employee of the Manager since November 1992.

ROBERT ROBOL, Assistant Treasurer since August 2005.

Senior Accounting Manager – Money Market Funds of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 41 years old and has been an employee of the Manager since October 1988.

ROBERT SVAGNA, Assistant Treasurer since December 2002.

Senior Accounting Manager – Equity Funds of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 38 years old and has been an employee of the Manager since November 1990.

GAVIN C. REILLY, Assistant Treasurer since December 2005.

Tax Manager of the Investment Accounting and Support Department of the Manager, and an officer of 91 investment companies (comprised of 200 portfolios) managed by the Manager. He is 37 years old and has been an employee of the Manager since April 1991.

JOSEPH W. CONNOLLY, Chief Compliance Officer since October 2004.

Chief Compliance Officer of the Manager and The Dreyfus Family of Funds (91 investment companies, comprised of 200 portfolios). From November 2001 through March 2004, Mr. Connolly was first Vice-President, Mutual Fund Servicing for Mellon Global Securities Services. In that capacity, Mr. Connolly was responsible for managing Mellon's Custody, Fund Accounting and Fund Administration services to third-party mutual fund clients. He is 48 years old and has served in various capacities with the Manager since 1980, including manager of the firm's Fund Accounting Department from 1997 through October 2001.

WILLIAM GERMENIS, Anti-Money Laundering Compliance Officer since October 2002.

Vice President and Anti-Money Laundering Compliance Officer of the Distributor, and the Anti-Money Laundering Compliance Officer of 87 investment companies (comprised of 196 portfolios) managed by the Manager. He is 35 years old and has been an employee of the Distributor since October 1998.

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

Mellon Trust of
New England, N.A.
One Boston Place
Boston, MA 02109

**Transfer Agent &
Dividend Disbursing Agent**

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

Distributor

Dreyfus Service Corporation
200 Park Avenue
New York, NY 10166

Telephone 1-800-645-6561

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: <http://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 <http://www.sec.gov> and may be reviewed and copied at the SEC's Public Reference Room in Washington, DC. Information on the operation of the Public Reference Room may be obtained by calling 1-800-SEC-0330.

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 12-month period ended June 30, 2005, is available through the fund's website at <http://www.dreyfus.com> and on the SEC's website at <http://www.sec.gov>. The description of the policies and procedures is also available without charge, upon request, by calling 1-800-645-6561.

