# MASTER OF FINANCE SAINT MARY'S UNIVERSITY

# Are IPOs of closed-end funds underpriced in the U.S. Market?

# Copyright by

Lirui Chen
Bachelor of Management
Changsha University of Science and Technology, Changsha, P.R.C. 2009

A Research Project Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Finance

Written for MFIN 6692, September 2012 Under the Direction of Dr. Francis Boabang

> Approved: Dr. Francis Boabang Faculty Advisor

Approved: Dr. Francis Boabang
MFIN Director

Date: September 18, 2012

# Acknowledgements

I would like to thank Dr. Francis Boabang for all his assistance in this research project. I would like take this opportunity to thank my friends and classmates for their help and encouragement. I would also like to express my appreciation to my beloved families who have been supporting me during my studying time in Canada.

#### **Abstract**

Are IPOs of closed-end funds underpriced in the U.S. Market?

By

#### Lirui Chen

September 18, 2012

The purpose of this study is to determine whether or not closed-end funds initial public offerings (IPOs) are underpriced or overpriced in the U.S. Market. Through the analysis, we conclude that 202 out of 229 selected sample of closed-end funds offer their shares at premium in the U.S. Market. Moreover, 47.6% of closed-end funds offer their shares at premium of 5% to 10%, 27.95% of funds issue shares at premium of 0% to 5%, and only small part of funds offer shares at premium over 10%. And also, the four factor regression result shows that only fund size had no certain relationship with fund premium. However other three factors, the turnover rate, composition, and fund performance are statically significant in the regression.

# **Table of Contents**

Chapter 1
1.1 Background
1.2 The problem of study
Chapter 2
2.1 The market efficiency hypothesis
2.2 Agency cost theory
2.3 Capital gain tax liabilities
2.4 Liquidity defects hypothesis
2.5 Market segmentation theory
2.6 Noise trade theory
2.7 Investors' sentiment theory
2.8 Market imperfection
2.9 Theories related underwriting process
2.10 Fund's performance theory
2.11 Other theories
Chapter 3
3.1 methodologies
3.2 Data selection14
Chapter 410
4.1 The result of IPO pricing
4.2 The four factors regression results
Chapter 519

Reference	21
Appendix A	24
Appendix B	34
Appendix C	40
Appendix D	50
Appendix E	56

#### Chapter 1

#### Introduction

## 1.1 Background

An initial public offering refers to companies issuing common stocks or shares to the public for the first time. It is issued by the small firms to raise funds to expand their business and also by the large private corporation to go public. There are many reasons why companies decide to list them listing their stocks. The most important rationale is that it allows firms to tap into a wide pool of investors to provide capital for future growth. It has been documented that the initial public offerings (IPOs) are underpriced in the sense that the offering price is much lower than the first day trading closing price. In this situation, investors are able to get the positive average abnormal return from the initial public offering. Previous studies show that the degree of underpricing is 11 precent to 16 precent in Canada and Australia and 8 precent to 12 precent in Europe. (Source: Bloomberg)

Closed-end funds are the oldest types of investment companies. Statistics show that, currently, there are more than 650 closed-end funds with \$224 billion in assets in the United States. Unlike open-end fund, closed-end funds have a fixed number of outstanding shares. Through the initial public offering, closed-end funds collect money from investors to invest in securities and shares issued trade on the exchange markets like the New York Stock Exchange (NYSE) and the American Stock Exchange (AMEX). After an initial public offering, investors can liquidate their

shares through trading with other investors rather than redemption. So, the closed-end fund may trade in the market above or below the net asset value (NAV) that determined by the forces of supply and demand among investors in the marketplace.

## 1.1 The purpose of this study

This study seeks to find whether the closed-end funds (CEFs) IPOs are underpriced or not in the U.S. market. No matter how the first initial offering of closed-end funds are overpriced, underpriced or correctly priced, this paper will discuss four factors which are turnover rate, fund size, fund managers performance and composition of fund affect the offering price and also to find out the coefficient of these four independent variables.

According to the statistics from the Closed-end Fund Association, there are almost 300 closed-end funds issued new shares to investors from January 2002 to June 2011. Investors who invest in closed-end funds barely have enough time to track the performance of stock market and professional financial knowledge. However, closed-end funds have a fund's manager team to achieve the fund's objectives. Because of the feature of closed-end funds, the fund's managers run investor's money without caring about uncertainty of cash inflow or outflow.

From investor's prospective, investing in closed-end fund is equivalent to lending money to fund managers to exchange for fixed income such as fund's distribution and obtain the potential funds market price appreciation such as potential growth rate of fund's net asset value. Once investors enter into a closed-end fund, they lose control of managing specific securities portfolio the funds chosen. Therefore, if investors

want to leave the fund, they have to trade with other investors in the market. This is dependent on the supply and demand of funds. So, there is no guarantee that closed-end funds will trade at premium or discount.

Consequently, choosing an appropriate closed-end fund is a crucial step when an investor plans to adopt closed-end funds. As mentioned it before, the value of investing in closed-end funds is dependent on the degree of underpricing in IPO and underlying the growth rate of fund's net asset value.

This paper provides a guideline for closed-end funds investors. Theoretically, investors can gain from underpriced securities as well as the closed-end fund's shares. If the closed-end fund's shares are underpriced in IPOs, investors may buy these shares and get fund's distribution and wait for market price appreciation.

#### 1.2 The problem of study

Basically, closed-end funds have fixed number of outstanding shares in the market after initial public offering without the secondary offering. Therefore, its share price is supposed to be stable in the market that reflects the intrinsic value. However, previous study shows that the offering price of closed-end funds is issued at premium approximately 10 per cent, and this premium will disappear over time in 120 days after IPO. This strange phenomenon is also called "discount puzzle" of closed-end funds.

If a fund is trading at a discount, informed investors will buy out all shares at discount price in order to force fund's manager to liquidate their shares at its market

value. But discount may simply represent that funds' portfolios may lose value in the market. More strange, sometimes the fund shares trade at premium that is above the net asset value. If funds can track portfolios performance very well, investors will conjecture this outperformance in the future and fund's manager will continue to conduct good investment. Thus, the premium is even higher. In other words, the premium represents the ability of manager's participations.

#### 1.2 Organization of the study

This study is broken down into five chapters. Chapter 1 provides a brief knowledge on research question and mention the purpose of the study. Chapter 2 provides a literature review of current study which is foundation of continues study. Chapter 3 provides the methodology and data description. Chapter 4 provides the result of empirical analysis. The final chapter, chapter 5 provides the summary and recommendations of this study.

# Chapter 2

#### The review of literature

This chapter provides a review of some important theories and previous research related to initial public offering.

# 2.1 The market efficiency hypothesis

The market efficiency hypothesis's main point is that the price should reflect all past and current available information. In consequence of this, no one can consistently earn abnormal return at the moment of time investment made. Once the closed-end funds offer their shares to investors, the outstanding share in the market should be certain, in other words, there is a positive relationship between closed-end funds' Net Present Value (NAV) and total assets value. Under the efficient market theory, the trading price of each share should equal to its instinct value or the deviation between this two will be small for a short time.

# 2.2 Agency cost theory

An agency cost occur when principal choose an "agent" act its behalf. However, the two parties have different interests and agenda, principal cannot directly make sure that agent always acting on its best interest. In a closed-end fund's first public offering, investors subscribe shares they offered and this behavior made a principal-agency relationship between investors and funds.

Jensen and Meckling (1976) explained the closed-end funds discount using the agency cost theory at the first place. They think the total agency cost was made of three proportions, which were investors' monitor cost, residual loss and management fee. Due to those cost associated with keeping the funds run continuously, the market value of share should below its Net Asset Value (Boudreaux, 1973). But, if the management fee is too high or the portfolio didn't reach the expectation, the agency cost would lead to discount. The classic agency cost theory believed that there was a positive relationship between the management fee and the range of discount. However, in the Malkiel's (1995) research shows that there was no certain relationship between discount and the management fee in percentage of Net Asset Value.

# 2.3 Capital gain tax liabilities

Another theory is related to the capital gains. When investors buy closed-end funds shares that imply the unrealized capital appreciation, at the same time, investors should aware that they may pay the potential capital gain tax in the future.

Manzler(2007) examined the impact of capital gains distribution rule on a closed-end funds. The result shows that unrealized capital gains have negative relationship with performance and net asset value premiums and future performance also affect the current net asset value premium.

# 2.4 Liquidity defects hypothesis

Liquidity defects hypothesis is a rejection of funds liquidity. On the one hand, if

the large fraction of less liquidity securities is contained in the fund's portfolios, there is the likelihood of depreciation in market price of closed-end fund's share. This is because the market price of fund's share cannot reflect the intrinsic value, on the other hand, unlike open-end funds, closed-end funds trade in the secondary market and cannot subscribe or redeem freely, the less liquidity classify as one reason of discount.

Similarly, Cherkes etc. (2009) states a trade-off between the liquidity benefits of investing in the closed-end funds and the fees charged by the fund managers. They establish a rational, liquidity-based model of closed-end funds (CEFs) that provides an economic motivation for the existence of "closed-end funds puzzle" which issue at premium and trade at discount.

# 2.5 Market segmentation theory

Market segment theory hold that the liquidity barrier and between difference market and the difference in homogeneous products made little information funds have an uncertain degree of underpricing.

Market segmentation divides into two parts, one is international segmentation, and another one is local segmentation. If investors want to use foreign securities to diversify risks, they have to pay expensive fees. Malkiel and Firstenberg (1978) believed that closed-end funds have no choice but trade at discount due to the public haven't knowledge about closed-end funds and less promotional sales, in contract with open-end funds. Additionally, Arnaud (1983) found that individual investors and institution investors buy shares at the same time institution investors had large

influence in funds price.

#### 2.6 Noise trade theory

However, traditional theory is not enough to explain "discount puzzle" issue. Since 1990s, the behavior finance theory break through the rational finance assumption that all investors are informed. It provides a new explanation for this issue.

De Long etc. (1990) propose a noise trade theory and establish a noise trade model including rational investors and noise traders. They believe that rational investors are risk averse and they reaction based on the change on the market basis factors. However, noise traders just hold partial information, therefore the responding they made always irrational and unpredictable. So, rational investors conduct arbitrage only if the discount is too low to compensate the noise trade risk.

Noise traders easily affect by the emotional factors to overestimate or under estimate the expected return. Due to the unpredictable feature of noise traders, investors not only face the systemic risk in the fund's portfolio but also are confronted with the risk of demand following random walk corresponding to change in demand of noise traders due to affecting by the emotion factors. Under the market that noise traders dominated, asset price will deviate away from fair price. So, when individual investor become optimistic, the fund's share will rise a little above the net asset value that discount will narrow down. On the contrary, if individual investors become pessimistic, the range of discount will expand. This is better for explaining the

discount issue of closed-end funds.

#### 2.7 Investors' sentiment theory

Investors' sentiment theory is another important theory in this issue. Lee etc. (1991) believe that the fluctuation of the in discount of closed-end fund is driven by the changes in the Investors' sentiment. They indicate that closed-end fund's discount display large volatility due to the emotion factor. And this discount or premium may change over time, which made important function in degree and structure of underpricing.

However, investor's emotion is hard to quantity, so it indirect testifies rather than direct testify. They test the time of new funds issue shares and relationship between volatility of return rate and fund's discount in small funds. They found that all closed-end funds discount are high correlated. Because individual investors are main participator, any changes in investor's sentiment directly affect the discount.

Additionally, new closed-end fund prefer to choose an appropriate time to issue shares which investors have optimistic expectation on the market. Empirical analysis prove that hypothesis, many new closed-end funds declare initial public offering when the current discount become smaller and smaller.

Investor sentiment theory also believes that discount of closed-end funds should

inverse related to small firm's return rate. The reason is, when investors are optimistic in fund's future performance, the discount should decrease, at the same time this kind of emotion effect may stimulate the demand for small firm stock largely, therefore the return on small firm should significantly increase.

#### 2.8 Market imperfection

Chordia and swaminathan (1998) pointed out that market imperfection is the reason behind the closed-end fund discount. And also, identify market imperfection may prevent institutional investors taking advantages from arbitrage opportunities provided by closed-end fund. Malkiel (1977) develop an empirical analysis conclude that structure of discount can partially explain by the basis of the theoretically principles and the size of discount is larger than expected. This result is consistent with market imperfection theory in capital asset pricing.

#### 2.9 Theories related underwriting process

Underwriting fees are considered overmuch and the price stabilization period in post-IPOs market of closed-end funds shares extended by investment bankers on purpose. Leonard, Nixon and Shull's (2005) finding shows that underwriting fees are barely related. There is no evidence prove that investment bankers using longer price stabilization period to cover underwriting cost.

Booth (2004) found that underwriter's reputation is positive related to the initial performance of closed-end funds. This relationship is persistent regardless of fund

characteristic, type and investment strategy.

#### 2.10 Fund's performance theory

Fund's performance theory explain the level of discount reflect the investors' expectation of funds future performance. If investors can get efficient information to determine whether the fund manager have good qualification and skills to run the portfolio and outperformance the market average return, then investors willing to trade share at premium.

Malkiel (1977) examined discount reflect the expectation of funds' performance and the positive relationship between future performance and current discount. However, Pratt (1966) indicates that there is no logical and mathematic relationship between closed-end fund's discount and fund's performance records. He improves that from four standpoints that are unrealized gain, overall performance, management fee and selling effort.

#### 2.11 Other theories

Lee etc. (1991) run a regression on return on size portfolio, closed-end funds discount and benchmark index. It found out that small firm outperform and discount of closed-end funds narrow down occur simultaneously.

In the article "Closed-End Fund Discounts and Expected Investment Performance", Ferguson and Leistikow (2004) discover that the equity closed-end funds sell their initial public offering at premium when existing funds sell at discount

and IPO's premium will disappear over time. They provide empirical analysis to prove discount of closed-end funds reflect the future expected fund's performance through testing the relationship premium change and investments performance and premium mean-variance.

Chen etc. (2004) took samples of closed-end funds in the Chinese market shows that the investors' overconfidence and liquidity dramatically affect the dynamic of discount.

Johnson etc. (2006) uses dividend-signaling model to test the impact of different dividend policy of closed-end funds. If a fund conduct a strong policy such as setting a minimum dividend yield of 10 per cent, it cause a significant reduction in discount compare to those funds without such policy.

#### Chapter 3

# Methodology and Sources of data

# 3.1 methodologies

To examine the whether is the closed-end funds are underpriced in the U.S market or not, using the following formula (formula 3.1)

$$DIS_i = \frac{OP_i - NAV_i}{NAV_i} \times 100\%....3.1$$

where  $DIS_i$  present the degree of underpricing or overpricing in a closed-end fund i

 $OP_i$  present the offer price for a closed-end fund i

 $NAV_i$  present the Net Asset value of the fund i when the shares has been issued. In this research paper, a regression model was used to find how the degree of IPO pricing would be effect among those four factors.

Dependent variable

The degree of IPO pricing is the dependent variable in this regression and will be measured by the result of formula 3.1

Independent variables

There are four independent variables in this study.

Turnover rate (TO)

Its measure the fund's trading activities in particular year, generally in one year. On the one hand, if the turnover rate is high, it indicates the funds using active strategy and may imply the higher transaction cost and more likely to distribute capital gain.

On another hand, if the turnover rate is too high, investors may aware that fund

managers attend to trading securities for collecting more in fees.

Turnover rate be measured in following formula

$$TO_i = \frac{TV_i}{TS_i}....3.3$$

where TV<sub>i</sub> is trading volume

TS<sub>i</sub> is total shares

Composition of closed-end fund (COM)

$$COM_i = \frac{MAK_i}{NAV_i \times M_i}.....3.4$$

where  $MAK_i$  is the market value of a closed-end fund i

 $M_i$  is the total shares in a closed-end fund

Fund size (SIZE)

$$SIZE_i = \ln M_i \dots 3.5$$

Performance of fund managers (PER)

Investors' investment decision and confidence may base on the fund performance.

And the fund's performance can be measured by growth rate of fund's net present value.

$$PER_{i,t0} = \frac{NAV_{i,t1} - NAV_{i,t0} + DIV_{i,t1}}{NAV_{i,t0}}......3.6$$

where  $NAV_{i,t0}$  is the net present value of a closed-end fund i in the IPO date

 $NAV_{i,t1}$  is the net present value of a closed-end fund i one year after IPO

DIV<sub>i,t1</sub> is the first dividend after IPO

#### 3.2 Data selection

Since the first initial public offering of the closed-end funds, there were 9263 funds in

the U.S. market according to the Bloomberg database. I cross check with The Closed-end Fund Association (CEFA) official website, not all of them are listing on it. Those 9263 funds also include closed-end country funds in any field. However, some of them were too old that were hard to get data information. For instance, the first closed-end funds was founding in 1901 and offering their shares in 1975. In this article, I obtain more than 2000 data sample from the Bloomberg database from 1993 to 2010. However, some of them don't have effective information for data analysis.

The purpose of this study is to determine how the four factors will affect the degree of the closed-end funds IPOs. So, all samples collected had available data information in following sections: offer price, market value of funds, management fees, total shares offered, trading volume, net asset value, dividend, and so. To sum up, the total sample is 230 and had valid data information to conduct regression analysis.

#### Chapter 4

# **Analyses of results**

This chapter will analyze the results conducted from the model to test whether the closed-end funds IPOs in U.S. Market are underprized or not and to see the influence of four factors mentioned in the previous chapter.

# 4.1 The result of IPO pricing

In order to detect whether the closed-end funds IPOs are correctly priced, we use the formula 3.1. The following table shows the result.

Table 4.1: The closed-end funds IPO results

The result of IPO	Discount	Correctly		Premium	
pricing		priced	0% <size< td=""><td>5%<size≤< td=""><td>Size&gt;10</td></size≤<></td></size<>	5% <size≤< td=""><td>Size&gt;10</td></size≤<>	Size>10
			≤5%	10%	%
Number of funds	17	10	64	109	29
percentage in total	7.42%	4.37%	27.95%	47.60%	12.66%

In order to determine whether or not the closed-end funds public offering are underpriced, we use the formula 3.1 discussed in chapter three to run the sample data, a positive sign means closed-end funds issue their shares at a premium, in contract, a negative sign represent closed-end funds offer their shares at a discount.

There is unexpected circumstance is only 10 closed-end funds public offering is fair priced, which means the offer price is equal to the Net Asset Value at first trading day. That can be explained that offer price fairly reflect the instinct value of

closed-end funds and expected fund return is match the market expectation.

A negative sign represent the discount in the result. Less than 8 percent of closed-end funds public offering issue at a discount. It refer to investors spend less money to get more instinct value shares if investors plan to subscribe. There are some many theories can explained discount. The discount also gets bigger in bear market. For investors, the closed-end funds had comparative advantages that investors get "buffering area" for taking market risk at the time they buying offered shares.

Because if market goes down investors loss a part of discount at first place.

The most important part is result shows that 202 out of 229 closed-end funds sample data were overpriced when they first offering their shares to the public. More specifically, From the Table 4.1, it clearly shows that almost a half of closed-end funds premium is between 5 percent and 10 percent and 28% of funds offer their shares at size premium of 0 percent to 5 percent. Those funds invest their pool of funds in any fields and sectors which indirectly indicated there is no certain relationship between the size of the premium and field funds invest for. One explanation of the premium is arbitrage theory. According to the arbitrage theory, there is a arbitrage opportunity when a same quality product has different price in several market under the consideration of transaction cost. In an efficient market, arbitrage opportunity bring a lots of arbitrage opportunity, and those transactions will make price go back equilibrium quickly. However, if arbitrage transaction cannot be complete without any problems, arbitrage opportunity will last for a long time. If investors can use arbitrage tool like stock index futures to get a "free lunch", it will

decrease the discount of closed-end funds and increase the premium of well performed funds. Another rational behind the premium is, investors don't have expertise and knowledge about investing, when a closed-end funds offer their shares to public, investors try to get information from any sources like relatives, institution opinions and funds advertisement, it may cause to investor focus on one "popular" funds and it may issue at a premium.

# 4.2 The four factors regression results

Base on the result which closed-end funds share issued at premium, we run the regression that to find out whether the four independent variables which are turnover, composition, fund size and fund performance had impact on premium.

Table 4.2 four factors regression results

Degree	coefficient	standard error	t value	p value
Turnover	0.0010628	0.0017815	1. 33	0.0329
composition	0. 1137288	0. 0195633	5. 81	0
fund size	0. 0194425	0. 0198852	-0.6	0.0551
performance	-0. 129723	0. 1001145	2. 25	0.019

From the table 4.2, we can see that except fund size factor other three factors are statistically significant at 5% significant level, which means composition, turnover and fund performance have influence in closed-end funds IPOs pricing. Furthermore, the coefficients of these three factors were positive, which means those factors were positive related with premium of IPOs. Additionally, the R square value of this regression model was 65 percent which present the 65 percent of premium of closed-end funds IPOs can be explained by those four factors.

#### Chapter 5

#### **Conclusion and recommendation**

Overall, in the selected 229 samples, 88% of closed-end funds offering their shares at a premium. And distribution of funds in size of premium is quite different. 47.6% of closed-end funds offer their shares at premium of 5% to 10%, 27.95% of funds issue shares at premium of 0% to 5%, and only small part of funds offer shares at premium over 10%.

Through the above regression results, only the fund size is nothing to do with premium, so when investors consider subscribing fund shares, fund size are irrelevant information.

From the turnover rate aspect, the coefficient is positive and significant from zero at 5% confidence level, it means the turnover rate, and in other words, liquidity is one important factor to affect closed-end funds IPO pricing. And also, the positive sign indicated the higher turnover the larger premium.

From the fund performance aspect, the regression results show that the better fund performance, the lower the premium and this reverse relationship is maintain under 5% confidence level. This kind of situation may imply that when investors buy closed-end funds shares, the future performance is not main criterion for fund growth stage. Besides, if a closed-end fund has good performance at one point time, individual investors will expect this good performance situation not last for a long time, they may sell it out to lead a decline of premium. For institution investors,

closed-end funds with good performance naturally attract institution investors holding a large portion of shares, it also cause a decline of premium.

#### Reference

Arnaud, A.A. (1983). Investment Trusts Explained.

Boudreaux, Kenneth J. (1973)"Discounts and Premiums on Closed-end Mutual Funds: A Study in Valuation" [J]The Journal of Finance, 28, 515-522.

Bodurtha, J., E. Kim and C. Lee (1995) "Closed-End Country Funds and US Market Sentiment" [J]Review of Financial Studies, 8, 879-918.

Barry C. B and Peavy J. W.(1990) "Risk characteristics of closed-end stock fund IPO"[J]Journal of Financial Services Research, 4, 65-76.

Brauer, Greggory (1988) "A. closed-end fund shares' abnormal returns and the information content of discounts and premiums" [J] Journal of Finance, , 43, 4, 113-128.

Chen G, Rui O and Xu Y.X. (2004) "Understanding the Closed-end Fund Puzzle from the Chinese Experience" http://www.utdallas.edu/~yexiaoxu/Ccfd\_f.PDF

David C Leonard, Terry D Nixon, David M Shull. (2005) "Marketing Closed-End Fund IPOs: An Analysis of the International Stock Funds" The Financial Review Vol. 40, Iss. 4; pg. 49

De Long J. B., A. Shleifer, L. H. Summers, R. J. Waldmann(1990) "Noise Trade Risk in Financial Market" [J] Journal of Political Economics, 98: 703-738.

Hanley K. W, Lee C. M.C. and Seguin P. J. (1994)The marketing of closed-end fund IPOs:evidence from transactions data. http://fic.wharton.upenn. edu/fic/papers/94/9421.pdf.

Lee C. M., A. Shleifer and R. Thaler.(1991) "Investors sentiment and the closed-end fund puzzle" [J] journal of finance, 6, 75-110.

Liang, J.R. Burnt(1987) "offerings: closed-end funds bring no blessings to shareholders" 32-36.

Michael C. Jensen & William H. Meckling (1976) "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure" [J] Journal of Financial Economics, V. 3, No. 4, pp. 305-360.

Malkiel, B. (1995) "Returns from Investing in Equity Mutual Funds 1971 to 1991"[J]Journal of Finance, Vol 50(2), pp.549-572

Malkiel, B. G.& Firstenberg, P. (1978) "A winning strategy for an efficient market" [J] Journal of Portfolio Management, 4, 20–25.

Malkiel, Burton G. (1977) "The valuation of Closed-End Investment Company Shares" [J] Journal of Finance 32, p.847-859.

Pontiff, Jeffrey E.(1996) "Costly Arbitrage: Evidence from Closed-End Funds."

Quarterly J. Of Economics. Available at SSRN: http://ssrn.com/abstract=7802

Thompson, Rex(1978) "The information content of discounts and premiums on closed-end fund shares" [J] Journal of Financial Economics, 6, 151-86.

Welch, I. (1989) "Seasoned offerings, imitation costs, and the underpricing of initial public offering" [J]Journal of Finance 44, 421-449.

Xu, Yexiao (2000) "Understanding closed-end fund puzzles-a stochastic turnover Perspective" Working Paper, School of Management, The University of Texas at Dallas.

Zweig, Martin E. (1973) "An investor expectations stock price predictive model using closed-end fund premium" [J] Journal of Finance, 28, 67-87.

# Appendix A

		offer	NAV at trading	
Fund Name	Ticker	price	day	Degree
AVENUE INCOME CREDIT	ACP			
STRATEG	US	20	19.06	4.93
ADVENT CLAYMORE GLOBAL	AGC			
CONVE	US	20	20.00	0.00
	AOD			
ALPINE TOTAL DYNAMIC DIVIDEN	US	20	19.06	4.93
	ARK			
BLACKROCK SENIOR HIGH INCOME	US	10	9.23	8.34
	AWP			
ALPINE GLOBAL PREMIER PROPER	US	20	18.43	8.52
BLACKROCK BUILD AMERICA	BBN			
BOND	US	20	19.06	4.93
BLACKSTONE/GSO LONG-SHORT	BGX			
CR	US	20	19.06	4.93
BLACKROCK DEFINED	BHL			
OPPORTUNIT	US	15	15.00	0.00
	BHY			
BLACKROCK HIGH YIELD TRUST	US	15	15.04	-0.27
	BNA			
BLACKROCK INCOME OPPTY TRST	US	15	15.00	0.00
	BPP			
BLACKROCK CREDIT ALLOC III	US	25	23.85	4.82
	BPS			
BLACKROCK PENN STRAT MUNI TR	US	10	14.30	-30.07
	BSL			
BLACKSTONE/GSO SENIOR FLOAT	US	20	14.82	34.95
	BTZ			
BLACKROCK CREDIT ALLOC IV	US	25	23.83	4.91
	CEM			
CLEARBRIDGE ENERGY MLP FUND	US	20	19.07	4.88
	CGO			
CALAMOS GLOBAL TOTAL RETURN	US	15	14.29	4.97
ABERDEEN CHILE FUND INC	CH US	15	6.49	131.12
MFS INTERMEDIATE HIGH INC FN	CIF US	10	9.23	8.34
	CMU			
MFS HIGH YIELD MUNICIPAL TRU	US	10	8.98	11.36
CORNERSTONE TOTAL RETURN	CRF			
FND	US	25	33.06	-24.38
CALAMOS STRAT TOT RETURN FD	CSQ	15	14.30	4.90

	US			
	DDF			
DELAWARE INV DIVIDEND & INC	US	15	14.20	5.63
DELAWARE ENHANCED GLOBAL	DEX			
DIV	US	20	19.06	4.93
	DGF			
DELAWARE INV GLB DIV&INC FD	US	15	13.51	11.03
	DHG			
DWS HIGH INCOME OPPORTUNITIE	US	20	38.20	-47.64
	DNP			
DNP SELECT INCOME FUND INC	US	10	8.15	22.70
	DSM			
DREYFUS STRATEGIC MUNI BD FD	US	10	9.78	2.25
	DUC			
DUFF & PHELPS UTIL & CORP BD	US	15	15.74	-4.70
	DVF			
BLACKROCK DIVERSIFIED INCM S	US	20	19.02	5.15
WELLS FARGO ADVANTAGE	EAD			
INCOME	US	15	14.30	4.90
	ECF			
ELLSWORTH FUND INC	US	10	8.26	21.07
MORGAN STANLEY EMERGING	EDD			
MARK	US	20	19.05	4.99
STONE HARBOR EMERGING	EDF			
MARKET	US	25	23.82	4.95
	EEA			
EUROPEAN EQUITY FUND INC/THE	US	10	6.97	43.47
BLACKROCK ENHANCED GOVT	EGF			
FUND	US	20	19.06	4.93
	EGX			
ENGEX INCORPORATED	US	10	11.38	-12.13
WESTERN ASSET GLOBAL HIGH IN	EHI US	15	14.30	4.90
EATON VANCE CALI MUN BOND II	EIA US	15	14.27	5.12
EATON VANCE MUNICIPAL BOND F	EIM US	15	14.56	3.02
EATON VANCE PA MU BD	EIP US	15	14.28	5.04
WESTERN ASSET EMERGING	EMD	$\Box$		
MARKE	US	15	14.39	4.24
CLEARBRIDGE ENERGY MLP	EMO			
OPPOR	US	20	18.89	5.88
WELLS FARGO ADVANTAGE	EOD			
GLOBAL	US	20	19.43	2.93
	EOT			
EATON VANCE NATIONAL MUNICIP	US	20	18.96	5.49

	ERC			
WELLS FARGO ADVANTAGE MULTI	US	20	19.06	4.93
	ERH			
WELLS FARGO ADVANTAGE UTILIT	US	20	18.90	5.82
	ETG			
EATON VANCE T/A GL DVD INCM	US	20	19.10	4.71
EATON VANCE RISK-MANAGED DIV	ETJ US	20	19.03	5.10
EATON VANCE TAX-MANAGED	ETY			
DIVE	US	20	20.00	0.00
	EVM			
EATON VANCE CAL MUNI BOND	US	15	14.48	3.59
EATON VANCE TAX-ADVANTAGED	EXD			
В	US	20	19.10	4.71
	FAM			
FIRST TRUST ABERDEEN GLOBAL	US	20	18.91	5.76
	FAV			
FIRST TRUST ACTIVE DIVIDEND	US	20	19.10	4.71
	FAX			
ABERDEEN ASIA-PAC INCOME FD	US	10	9.19	8.81
	FEN			
ENERGY INCOME AND GROWTH FD	US	20	19.10	4.71
	FEO			
FIRST TRUST ABERDEEN EMG OPP	US	20	19.06	4.93
	FFA			
FIRST TRUST ENH EQUITY INC	US	20	19.24	3.95
	FGF			
SUNAMERICA FOCUSED ALPHA GR	US	20	19.06	4.93
SUNAMERICA FOCUSED ALPHA L/C	FGI US	20	19.12	4.60
FIRST TRUST STRAT H/I FUND	FHI US	20	20.00	0.00
	FHO			
FIRST TRUST STRAT H/I FUND 3	US	20	19.07	4.88
	FMN			
FEDERATED PREMIER MUNI INC	US	15	14.34	4.60
	FMY			
FIRST TRUST MORTGAGE INCOME	US	20	18.59	7.58
FRANKLIN UNIVERSAL TRUST	FT US	10	9.30	7.53
FRANKLIN TEMPLETON LTD DUR	FTF US	15	14.33	4.68
	GAB			
GABELLI EQUITY TRUST	US	10	6.90	44.97
GUGGENHEIM BUILD AMERICA	GBAB			
BON	US	20	19.10	4.71
	GCF			
GLOBAL INCOME&CURR FUND INC	US	20	4.32	362.96

WESTERN ASSET GLOBAL	GDF			
PARTNER	US	15	14.44	3.88
	GDO			
WESTERN ASSET GL CORP DEF OP	US	20	19.06	4.93
	GDV			
GABELLI DIVIDEND & INCOME TR	US	20	19.06	4.93
	GFY			
WESTERN ASSET VARIABLE RATE	US	20	19.06	4.93
GLOBAL HIGH INCOME FUND INC	GHI US	15	15.00	0.00
TEMPLETON GLOBAL INCOME	GIM			
FUND	US	10	9.41	6.27
	GLQ			
CLOUGH GLOBAL EQUITY FUND	US	20	19.06	4.93
	GLV			
CLOUGH GLOBAL ALLOCATION FD	US	20	20.59	-2.87
	GRR			
ASIA TIGERS FUND INC	US	15	13.97	7.37
	HCF			
HIGHLAND CREDIT STRATEGIES F	US	20	18.06	10.74
	HHY			
HELIOS HIGH YIELD FUND	US	15	14.93	0.47
WESTERN ASSET HIGH INC FD	HIF US	15	13.90	7.91
HELIOS HIGH INCOME FUND INC	HIH US	15	71.65	-79.06
BLACKROCK HIGH INCOME				
SHARES	HIS US	10	9.11	9.77
	HNW			
PIONEER DIVERSIFIED HIGH INC	US	25	23.82	4.95
	HPF			
JOHN HANCOCK PFD INCOME II	US	25	23.88	4.69
JOHN HANCOCK PFD INCOME FD	HPI US	25	23.85	4.82
	HSM			
HELIOS STRATEGIC MORTGAGE IN	US	15	14.20	5.63
	HTR			
HELIOS TOTAL RETURN FUND INC	US	12	11.11	8.01
JOHN HANCOCK	HTY			
TAX-ADVANTAGED	US	20	20.10	-0.50
	HYB			
NEW AMERICA HIGH INCOME FUND	US	10	41.80	-76.08
	HYT			
BLACKROCK CORPORATE HY FD VI	US	15	14.33	4.68
ING ASIA PACIFIC HIGH DIVIDE	IAE US	25	24.02	4.08
MORGAN STANLEY INCOME SECS	ICB US	25	17.17	45.60
INVESCO INSURED CALIFORNIA M	ICS US	15	13.91	7.84

ING INFRASTRUCTURE INDUSTRIA	IDE US	20	19.06	4.93
INDIA FUND INC	IFN US	15	13.92	7.76
ING GLOBAL ADVANTAGE AND PRE	IGA US	20	19.09	4.77
INVESCO CALIFORNIA INSURED M	IIC US	15	12.49	20.10
ING INTERNATIONAL HIGH DIVID	IID US	20	20.00	0.00
INVESCO INSURED MUNICIPAL IN	IIM US	15	12.62	18.86
WESTERN ASSET INFLATION MANA	IMF US	20	19.06	4.93
INVESCO INSURED MUNICIPAL SE	IMS US	15	13.91	7.84
INVESCO CALIFORNIA QUALITY M	IQC US	15	11.68	28.42
NEW IRELAND FUND INC	IRL US	12	10.96	9.49
	JCE			
NUVEEN CORE EQUITY ALPHA FUN	US	20	19.10	4.71
JF CHINA REGION FUND INC	JFC US	15	8.82	70.05
NUVEEN TAX-ADVANTAGED				
FLOATI	JFP US	15	14.27	5.12
	JHP			
NUVEEN QUALITY PREFERRED III	US	15	14.32	4.75
	JOF			
JAPAN SMALLER CAPITALIZATION	US	12.1	11.06	9.40
	JPC			
NUVEEN MULTI-ST INC & GTH	US	15	14.33	4.68
NUVEEN QUALITY PREFERRED II	JPS US	15	14.31	4.82
NUVEEN EQUITY PREMIUM				
INCOME	JPZ US	20	19.40	3.09
	JSN			
NUVEEN EQUITY PREM OPP FUND	US	20	19.08	4.82
NUVEEN QUALITY PREFERRED INC	JTP US	15	14.27	5.12
KAYNE ANDERSON ENERGY	KED			
DEVELO	US	25	24.28	2.97
	KEF			
KOREA EQUITY FUND	US	12	10.72	11.91
	KEF			
KOREA EQUITY FUND	US	12	10.75	11.63
KOREA FUND INC	KF US	16.8	138.79	-87.90
DWS HIGH INCOME TRUST	KHI US	12	22.18	-45.90
KAYNE ANDERSON	KMF			
MIDSTEAM/ENER	US	25	23.83	4.93
	KSM			
DWS STRATEGIC MUNI INCOME TR	US	12	11.27	6.48
KAYNE ANDERSON ENERGY TOT	KYE			
RT	US	25	23.96	4.34
KAYNE ANDERSON MLP	KYN			
INVESTMEN	US	25	25.00	0.00

1	LEO			
DREYFUS STRATEGIC MUNICIPALS	US	10	9.57	4.49
LAZARD GLOBAL TOT RT & INC	LGI US	20	19.06	4.93
	LOR			
LAZARD WORLD DIVIDEND & INCO	US	20	18.93	5.65
EATON VANCE MASSACH MUN	MAB			
BOND	US	15	14.29	4.97
	MAV			
PIONEER MUNI HI INC ADV TRST	US	15	14.25	5.26
BLACKROCK MUNIENHANCED	MEN			
FUND	US	12	9.83	22.08
	MFD			
MACQUARIE/FT GL INT/UT DV IN	US	20	19.10	4.71
	MFM			
MFS MUNICIPAL INCOME TRUST	US	10	8.97	11.48
	MFV			
MFS SPECIAL VALUE TRUST	US	15	13.68	9.65
MFS INTERMEDIATE INC TRUST	MIN US	10	9.27	7.87
	MIW			
EATON VANCE MICHI MUNI BND	US	15	14.25	5.26
	MRF			
AMERICAN INCOME FUND INC	US	12	11.54	3.99
MORGAN STANLEY EMRG MKT	MSD			
DEBT	US	15	14.08	6.53
MADISON STRATEGIC SECTR	MSP			
PREM	US	20	19.06	4.93
	MSY			
INVESCO HIGH YIELD INVEST FD	US	15	14.07	6.61
	MTT			
WESTERN ASSET MUNCIPAL DEFIN	US	20	19.10	4.71
	MZF			
MANAGED DURATION INVESTMENT	US	15	14.29	4.97
	NBB			
NUVEEN BUILD AMERICAN BOND	US	20	19.10	4.71
	NBD			
NUVEEN BUILD AMERICA BOND OP	US	20	19.09	4.77
	NCO			
NUVEEN CAL MUNI MKT OPPOR FD	US	15	14.64	2.46
NUVEEN ENHANCED MUNICIPAL	NEV			
VA	US	15	14.33	4.68
	NGO			
NUVEEN CONNECTICUT DVD ADV 3	US	15	14.31	4.82
	NGZ			
AGIC GLOBAL EQUITY & CONVERT	US	25	25.00	0.00

	NHS			
NEUBERGER BERMAN HIGH YIELD	US	15	14.30	4.93
AGIC EQUITY & CONVERTIBLE IN	NIE US	25	25.12	-0.48
NUVEEN NORTH CAROLINA DVD 3	NII US	15	14.29	4.97
	NKG			
NUVEEN GEORGIA DVD ADV MU 2	US	15	14.29	4.97
	NKX			
NUVEEN INS CA T/F ADV MUN FD	US	15	14.29	4.97
	NMA			
NUVEEN MUNI ADVANTAGE FUND	US	15	14.06	6.69
	NMT			
NUVEEN MA PREMIUM INC MUNI	US	15	12.78	17.37
	NMY			
NUVEEN MD PREMIUM INC MUNI	US	15	14.09	6.46
	NMZ			
NUVEEN MUNI HIGH INCM OPPORT	US	15	14.33	4.68
	NNC	4.5	44.04	7.07
NUVEEN NC PREMIUM INC MUNI	US	15	14.01	7.07
ALLIVEEN MEW YORK DEDE. MUNI	NNP	45	4440	0.40
NUVEEN NEW YORK PERF+ MUNI	US	15	14.13	6.16
NUVEEN NY MUNI VALUE FUND	NNY US	10	9.96	0.40
NOVEEN NY MONI VALUE FOND	NOM	10	9.90	0.40
NUVEEN MO PREMIUM INC MUNI	US	15	13.90	7.91
NOVEEN WOT REWIGHT INC MONT	NPG	13	13.90	7.51
NUVEEN GEORGIA PREMIUM INC	US	15	13.96	7.45
NUVEEN PREMIUM INC MUNI FUND	NPI US	15	14.15	6.01
	NPN			
NUVEEN PENNSYLVANIA MUNICIPA	US	15	14.33	4.68
NUVEEN PERFORMANCE PLUS	NPP			
MUNI	US	15	14.02	6.99
	NPT			
NUVEEN PREMIUM INC MUNI FD 4	US	15	14.01	7.07
	NPV			
NUVEEN VIRGINIA PREMIUM INC	US	15	14.06	6.69
	NPY			
NUVEEN PA PREMIUM INC MUNI 2	US	15	13.99	7.22
	NQJ			
NUVEEN NJ INV QUAL MUNI FD	US	15	14.13	6.16
	NQM			
NUVEEN INV QUALITY MUNI FD	US	15	14.83	1.15
	NQP			
NUVEEN PENN INV QUAL MUNI FD	US	15	14.26	5.19

NUVEEN SELECT QUALTY MUNI FD         US         15         14.34         4.60           NUVEEN QUALITY INCOME MUNI         US         15         14.15         6.01           NUVEEN INS NY T/F ADV MUNI         US         15         14.29         4.97           NEUBERGER BERMAN REAL         NRO         15         14.30         4.90           ESTATE         US         15         14.30         4.90           NUVEEN CONNECTICUT PREM INC         US         15         13.96         7.45           TORTOISE MLP FUND INC         US         25         23.83         4.91           NUVEEN TEXAS QUALITY INC MUNI         US         15         14.42         4.02           NUVEEN NJ DVD ADV MUNI FD 2         US         15         14.37         4.38           NUVEEN MICH QUALITY INC MUNI         US         15         14.22         5.49           NUVEEN OHIO QUALITY INC MUNI         US         15         13.96         7.45           NUVEEN MUNICIPAL VALUE FUND         US         15         13.96         7.45           NUVEEN MUNICIPAL VALUE FD 2         US         15         14.33         4.68           NUVEEN INSD DVD ADV MUNI FD 3         US         15         14.45         3.81<		NQS			
NUVEEN QUALITY INCOME MUNI         US         15         14.15         6.01           NUVEEN INS NY T/F ADV MUNI         US         15         14.29         4.97           NEUBERGER BERMAN REAL         NRO         15         14.30         4.90           NTC         NTC         NTC         15         13.96         7.45           NUVEEN CONNECTICUT PREM INC         US         15         13.96         7.45           TORTOISE MLP FUND INC         US         25         23.83         4.91           NUVEEN TEXAS QUALITY INC MUN         US         15         14.42         4.02           NUVEEN NJ DVD ADV MUNI FD 2         US         15         14.37         4.38           NUVEEN MICH QUALITY INC MUNI         US         15         14.22         5.49           NUVEEN OHIO QUALITY INC MUNI         US         15         13.96         7.45           NUVEEN MUNICIPAL VALUE FUND         US         10         9.51         5.15           NUVEEN INSD DVD ADV MUNI FD         US         15         14.33         4.68           NUVEEN OH DVD ADV MUNI FD 3         US         15         14.45         3.81	NUVEEN SELECT QUALTY MUNI FD	-, -	15	14.34	4.60
NUVEEN INS NY T/F ADV MUNI US 15 14.29 4.97  NEUBERGER BERMAN REAL NRO ESTATE US 15 14.30 4.90  NTC  NUVEEN CONNECTICUT PREM INC US 15 13.96 7.45  TORTOISE MLP FUND INC US 25 23.83 4.91  NUVEEN TEXAS QUALITY INC MUN US 15 14.42 4.02  NUVEEN NJ DVD ADV MUNI FD 2 US 15 14.37 4.38  NUVEEN MICH QUALITY INC MUN US 15 14.22 5.49  NUVEEN OHIO QUALITY INC MUNI US 15 13.96 7.45  NUVEEN MUNICIPAL VALUE FUND US 10 9.51 5.15  NUVEEN MUNICIPAL VALUE FD 2 US 15 14.33 4.68  NUVEEN OH DVD ADV MUNI FD 3 US 15 14.95 0.33  NUVEEN OH DVD ADV MUNI FD 3 US 15 14.45 3.81  NUVEEN OH DVD ADV MUNI FD 3 US 15 14.45 3.81		NQU			
NUVEEN INS NY T/F ADV MUNI         US         15         14.29         4.97           NEUBERGER BERMAN REAL         NRO         15         14.30         4.90           ESTATE         US         15         14.30         4.90           NTC         NTC         NTC         NTC         15         13.96         7.45           NUVEEN CONNECTICUT PREM INC         US         15         13.96         7.45           TORTOISE MLP FUND INC         US         25         23.83         4.91           NUVEEN TEXAS QUALITY INC MUNI         US         15         14.42         4.02           NUVEEN NJ DVD ADV MUNI FD 2         US         15         14.37         4.38           NUVEEN MICH QUALITY INC MUNI         US         15         14.22         5.49           NUVEEN OHIO QUALITY INC MUNI         US         15         13.96         7.45           NUVEEN MUNICIPAL VALUE FUND         US         10         9.51         5.15           NUVEEN INSD DVD ADV MUNI FD 2         US         15         14.33         4.68           NUVEEN OH DVD ADV MUNI FD 3         US         15         14.95         0.33           NUVEEN OH DVD ADV MUNI FD 3         US         15         14.45	NUVEEN QUALITY INCOME MUNI	US	15	14.15	6.01
NEUBERGER BERMAN REAL ESTATE  US  15  14.30  4.90  NTC  NUVEEN CONNECTICUT PREM INC  US  15  13.96  7.45  TORTOISE MLP FUND INC  US  25  23.83  4.91  NTX  NUVEEN TEXAS QUALITY INC MUN  US  15  14.42  4.02  NUVEEN NJ DVD ADV MUNI FD 2  US  NUM  NUVEEN MICH QUALITY INC MUNI  US  15  14.22  5.49  NUVEEN OHIO QUALITY INC MUNI  US  15  13.96  7.45  NUV  NUVEEN MUNICIPAL VALUE FUND  US  15  14.33  4.68  NUVEEN OH DVD ADV MUNI FD 2  US  15  14.33  4.68  NUVEEN OH DVD ADV MUNI FD 3  US  15  14.95  0.33  NUV  NUVEEN OH DVD ADV MUNI FD 3  US  15  14.45  3.81		NRK			
ESTATE	NUVEEN INS NY T/F ADV MUNI	US	15	14.29	4.97
NUVEEN CONNECTICUT PREM INC US 15 13.96 7.45  NTG NTG US 25 23.83 4.91  NUVEEN TEXAS QUALITY INC MUN US 15 14.42 4.02  NUVEEN NJ DVD ADV MUNI FD 2 US 15 14.37 4.38  NUVEEN MICH QUALITY INC MUNI US 15 14.22 5.49  NUVEEN OHIO QUALITY INC MUNI US 15 13.96 7.45  NUVEEN MUNICIPAL VALUE FUND US 10 9.51 5.15  NUVEEN MUNICIPAL VALUE FD 2 US 15 14.33 4.68  NUVEEN INSD DVD ADV MUNI FD 3 US 15 14.95 0.33  NUVEEN OH DVD ADV MUNI FD 3 US 15 14.45 3.81	NEUBERGER BERMAN REAL	NRO			
NUVEEN CONNECTICUT PREM INC         US         15         13.96         7.45           NTG         NTG         NTG         NTG         NTG         NTG         NTS         15         25         23.83         4.91           NUVEEN TEXAS QUALITY INC MUN         US         15         14.42         4.02           NUVEEN NJ DVD ADV MUNI FD 2         US         15         14.37         4.38           NUVEEN MICH QUALITY INC MUNI         US         15         14.22         5.49           NUVEEN OHIO QUALITY INC MUNI         US         15         13.96         7.45           NUVEEN MUNICIPAL VALUE FUND         US         10         9.51         5.15           NUVEEN MUNICIPAL VALUE FD 2         US         15         14.33         4.68           NUVEEN INSD DVD ADV MUNI FD         US         15         14.95         0.33           NUVEEN OH DVD ADV MUNI FD 3         US         15         14.45         3.81	ESTATE	US	15	14.30	4.90
TORTOISE MLP FUND INC  US  25  23.83  4.91  NTX  NUVEEN TEXAS QUALITY INC MUN  NUJ  NUVEEN NJ DVD ADV MUNI FD 2  NUM  NUVEEN MICH QUALITY INC MUNI  US  15  14.37  4.38  NUM  NUVEEN MICH QUALITY INC MUNI  US  15  14.22  5.49  NUO  NUVEEN OHIO QUALITY INC MUNI  US  15  13.96  7.45  NUV  NUVEEN MUNICIPAL VALUE FUND  NUW  NUVEEN MUNICIPAL VALUE FD 2  US  15  14.33  4.68  NUV  NUVEEN INSD DVD ADV MUNI FD  US  15  14.95  0.33  NVJ  NUVEEN OH DVD ADV MUNI FD 3  US  15  14.45  3.81		NTC			
TORTOISE MLP FUND INC  US  25  23.83  4.91  NTX  NUVEEN TEXAS QUALITY INC MUN  NUJ  NUJ  NUJ  NUVEEN NJ DVD ADV MUNI FD 2  US  15  14.42  4.02  NUM  NUVEEN MICH QUALITY INC MUNI  US  15  14.22  5.49  NUO  NUVEEN OHIO QUALITY INC MUNI  US  15  13.96  7.45  NUV  NUVEEN MUNICIPAL VALUE FUND  US  10  9.51  5.15  NUW  NUVEEN MUNICIPAL VALUE FD 2  US  15  14.33  4.68  NVG  NUVEEN INSD DVD ADV MUNI FD  US  15  14.95  0.33  NUVEEN OH DVD ADV MUNI FD 3  US  15  14.45  3.81	NUVEEN CONNECTICUT PREM INC	US	15	13.96	7.45
NUVEEN TEXAS QUALITY INC MUN US 15 14.42 4.02  NUJ NUJ NUJ NUJ NUJ NUJ NUM NUM NUM NUVEEN MICH QUALITY INC MUNI US 15 14.22 5.49  NUO NUVEEN OHIO QUALITY INC MUNI US 15 13.96 7.45  NUV NUVEEN MUNICIPAL VALUE FUND US 10 9.51 5.15  NUW NUVEEN MUNICIPAL VALUE FD 2 US 15 14.33 4.68  NUV NUVEEN INSD DVD ADV MUNI FD US 15 14.95 0.33  NUVEEN OH DVD ADV MUNI FD 3 US 15 14.45 3.81		NTG			
NUVEEN TEXAS QUALITY INC MUN       US       15       14.42       4.02         NUJ       NUJ       NUJ       NUJ       NUJ       NUJ       NUJ       15       14.37       4.38         NUVEEN NICH QUALITY INC MUNI       US       15       14.22       5.49         NUV       NUO       NUO       NUO       NUV         NUVEEN OHIO QUALITY INC MUNI       US       15       13.96       7.45         NUVEEN MUNICIPAL VALUE FUND       US       10       9.51       5.15         NUW       NUW       NUW       NUW       14.33       4.68         NUVEEN MUNICIPAL VALUE FD 2       US       15       14.95       0.33         NUVEEN INSD DVD ADV MUNI FD       US       15       14.95       0.33         NUVEEN OH DVD ADV MUNI FD 3       US       15       14.45       3.81	TORTOISE MLP FUND INC	US	25	23.83	4.91
NUVEEN NJ DVD ADV MUNI FD 2  NUJ  NUVEEN MICH QUALITY INC MUNI  NUVEEN OHIO QUALITY INC MUNI  NUVEEN MUNICIPAL VALUE FUND  NUV  NUVEEN MUNICIPAL VALUE FD 2  NVG  NUVEEN INSD DVD ADV MUNI FD 3  NVJ  NUVEEN OH DVD ADV MUNI FD 3  NUJ  NUJ  NUVEEN INSD DVD ADV MUNI FD 3  NVJ  NUVEEN INSD DVD ADV MUNI FD 3  NVJ  NVY  NUVEEN INSD DVD ADV MUNI FD 3  NVJ  NVY  NUVEEN INSD DVD ADV MUNI FD 3  NVJ  NVY  NUVEEN INSD DVD ADV MUNI FD 3  NVJ  NVY		NTX			
NUVEEN NJ DVD ADV MUNI FD 2       US       15       14.37       4.38         NUM       NUM       15       14.22       5.49         NUO       NUO       NUO       15       13.96       7.45         NUVEEN OHIO QUALITY INC MUNI       US       15       13.96       7.45         NUV       NUV       10       9.51       5.15         NUVEEN MUNICIPAL VALUE FUND       US       15       14.33       4.68         NUVEEN MUNICIPAL VALUE FD 2       US       15       14.95       0.33         NUVEEN INSD DVD ADV MUNI FD       US       15       14.95       0.33         NVJ       NVJ       NVJ       14.45       3.81         NVY       NVY       15       14.45       3.81	NUVEEN TEXAS QUALITY INC MUN	US	15	14.42	4.02
NUVEEN MICH QUALITY INC MUNI         NUM         15         14.22         5.49           NUV         NUV         15         13.96         7.45           NUV EEN MUNICIPAL VALUE FUND         US         10         9.51         5.15           NUW NUVEEN MUNICIPAL VALUE FD 2         US         15         14.33         4.68           NVG NUVEEN INSD DVD ADV MUNI FD         US         15         14.95         0.33           NVJ NUVEEN OH DVD ADV MUNI FD 3         US         15         14.45         3.81					
NUVEEN MICH QUALITY INC MUNI       US       15       14.22       5.49         NUO       NUO       15       13.96       7.45         NUV       NUV       10       9.51       5.15         NUW       NUW       10       9.51       5.15         NUVEEN MUNICIPAL VALUE FD 2       US       15       14.33       4.68         NVG       NVG       15       14.95       0.33         NUVEEN INSD DVD ADV MUNI FD       US       15       14.45       3.81         NUVEEN OH DVD ADV MUNI FD 3       US       15       14.45       3.81	NUVEEN NJ DVD ADV MUNI FD 2	US	15	14.37	4.38
NUVEEN OHIO QUALITY INC MUNI US 15 13.96 7.45  NUV  NUVEEN MUNICIPAL VALUE FUND US 10 9.51 5.15  NUW  NUVEEN MUNICIPAL VALUE FD 2 US 15 14.33 4.68  NVG  NUVEEN INSD DVD ADV MUNI FD US 15 14.95 0.33  NVJ  NUVEEN OH DVD ADV MUNI FD 3 US 15 14.45 3.81					
NUVEEN OHIO QUALITY INC MUNI       US       15       13.96       7.45         NUV       NUV       NUV       9.51       5.15         NUW       NUW       NUW       15       14.33       4.68         NVG       NVG       NVG       15       14.95       0.33         NUVEEN INSD DVD ADV MUNI FD       US       15       14.45       0.33         NUVEEN OH DVD ADV MUNI FD 3       US       15       14.45       3.81	NUVEEN MICH QUALITY INC MUNI		15	14.22	5.49
NUV					
NUVEEN MUNICIPAL VALUE FUND       US       10       9.51       5.15         NUW       NUW         NUVEEN MUNICIPAL VALUE FD 2       US       15       14.33       4.68         NVG       NVG         NUVEEN INSD DVD ADV MUNI FD       US       15       14.95       0.33         NVJ       NVJ         NUVEEN OH DVD ADV MUNI FD 3       US       15       14.45       3.81	NUVEEN OHIO QUALITY INC MUNI		15	13.96	7.45
NUVEEN MUNICIPAL VALUE FD 2  US  15  14.33  4.68  NVG  NUVEEN INSD DVD ADV MUNI FD  US  15  14.95  0.33  NVJ  NUVEEN OH DVD ADV MUNI FD 3  US  15  14.45  3.81					
NUVEEN MUNICIPAL VALUE FD 2       US       15       14.33       4.68         NVG       NVG         NUVEEN INSD DVD ADV MUNI FD       US       15       14.95       0.33         NVJ       NVJ         NUVEEN OH DVD ADV MUNI FD 3       US       15       14.45       3.81         NVY	NUVEEN MUNICIPAL VALUE FUND		10	9.51	5.15
NVG NUVEEN INSD DVD ADV MUNI FD US 15 14.95 0.33  NVJ NUVEEN OH DVD ADV MUNI FD 3 US 15 14.45 3.81  NVY	NUMERIAN NUMBER OF STREET		4.5	44.00	4.00
NUVEEN INSD DVD ADV MUNI FD         US         15         14.95         0.33           NVJ         NVJ         15         14.45         3.81           NVY         NVY         15         14.45         3.81	NOVEEN MUNICIPAL VALUE FD 2		15	14.33	4.68
NUVEEN OH DVD ADV MUNI FD 3 US 15 14.45 3.81 NVY	NILIVEEN INCO DVD ADV MUNIED		45	44.05	0.00
NUVEEN OH DVD ADV MUNI FD 3         US         15         14.45         3.81           NVY         3.81<	NOVEEN INSD DVD ADV MONI FD		15	14.95	0.33
NVY	NUVEEN OH DVD ADV MUNI ED 3		15	11 15	2 04
	NOVEEN ON DVD ADV WON FD 3		10	14.45	3.01
NOVEENTA DVD ADV MONTO Z	NUVEEN BA DVD ADV MUNI ED 2		15	15 17	-1 12
NWI NWI	NOVELN FA DVD ADV WONIT D 2		13	13.17	-1.12
NUVEEN MARYLAND DVD ADV MU 3 US 15 14.31 4.82	NUVEEN MARYLAND DVD ADV MU 3		15	14 31	4 82
NXE NXE	THE VEET WINNEY EXTREME BY BY BY WE'S		10	11.01	1.02
NUVEEN ARIZONA DVD ADV MUN 3 US 15 14.29 4.97	NUVEEN ARIZONA DVD ADV MUN 3		15	14.29	4.97
NXR NXR			1	5	1.01
NUVEEN SELECT T/F INC III US 15 13.79 8.77	NUVEEN SELECT T/F INC III		15	13.79	8.77
NYV	_			<del>-</del>	
NUVEEN NY MUNI VALUE FUND 2 US 15 14.29 4.97	NUVEEN NY MUNI VALUE FUND 2		15	14.29	4.97
NUVEEN GEORGIA DVD ADV MUNI NZX	NUVEEN GEORGIA DVD ADV MUNI	NZX			
2 US 15 15.17 -1.12	2	US	15	15.17	-1.12
PCF		PCF			
PUTNAM HIGH INCOME SECURITIE US 10 8.08 23.76	PUTNAM HIGH INCOME SECURITIE	US	10	8.08	23.76
PCK		PCK			
PIMCO CALIFORNIA MUNICIPA II US 15 14.33 4.68	PIMCO CALIFORNIA MUNICIPA II	US	15	14.33	4.68

	PCN			
PIMCO CORPORATE INCOME FUND	US	15	14.34	4.60
	PDT			
JOHN HAN PREMIUM DIVIDEND FD	US	12	10.35	15.94
PIMCO INCOME STRATEGY FUND	PFL US	20	18.35	8.99
	PGP			
PIMCO GLOBAL STOCKSPLUS & IN	US	25	23.88	4.69
	PHD			
PIONEER FLOATING RATE TRUST	US	20	19.06	4.93
	PHF			
PACHOLDER HIGH YIELD FUND	US	20	18.42	8.58
	PHK			
PIMCO HIGH INCOME FUND	US	15	14.31	4.82
	PMO			
PUTNAM MUNI OPPORTUNITIES TR	US	15	13.49	11.19
	PMX			
PIMCO MUNI INCOME FUND III	US	15	14.31	4.82
	PSW			
BLACKROCK CREDIT ALLOCAT I	US	25	23.87	4.73
	PSY			
BLACKROCK CREDIT ALLOCAT II	US	25	23.87	4.73
PIMCO CORPORATE	PTY			
OPPORTUNITY	US	15	4.43	238.60
	PYN			
PIMCO NEW YORK MUNICIPAL III	US	15	14.30	4.90
	PZC			
PIMCO CALIFORNIA MUNICIP III	US	15	14.30	4.90
	RAP			
RMR ASIA PACIFIC REAL ESTATE	US	20	37.19	-46.23
	RCS			
PIMCO STRATEGIC GLBL GOVT	US	12.5	12.22	2.29
BLACKROCK INVESTMENT	RFA			
QUALITY	US	15	12.95	15.83
RMR REAL ESTATE INCOME FUND	RIF US	15	73.54	-79.60
LMP REAL ESTATE INCOME FUND	RIT US	15	14.17	5.86
	RMT			
ROYCE MICRO-CAP TRUST INC	US	7.5	7.39	1.49
BLACKROCK NEW YORK INVT	RNY			
QUAL	US	15	14.52	3.31
	RVT			
ROYCE VALUE TRUST	US	10	8.37	19.47
	SCD			
LMP CAPITAL AND INCOME FUND	US	20	19.06	4.93

	SLA			
AMERICAN SELECT PORTFOLIO	US	15	12.02	24.79
	SMF			
SALIENT MLP & ENERGY INFRAST	US	25	23.79	5.09
	SPE			
SPECIAL OPPORTUNITIES FUND	US	15	13.39	12.02
	SRV			
CUSHING MLP TOTAL RETURN FUN	US	20	20.00	0.00
	STK			
COLUMBIA SELIG PREM TECH	US	20	19.10	4.71
TEMPLETON EMERG MKTS INC FD	TEI US	15	14.37	4.38
	TPZ			
TORTOISE POWER AND ENERGY IN	US	20	19.06	4.93
TCW STRATEGIC INCOME FUND IN	TSI US	10	8.04	24.38
TORTOISE NORTH AMERICAN	TYN			
ENER	US	25	23.66	5.66
	TYY			
TORTOISE ENERGY CAPITAL CORP	US	25	23.79	5.09
	UTG			
REAVES UTILITY INCOME FUND	US	20	19.10	4.71
INVESCO VAN KAMPEN BOND	VBF			
FUND	US	26.5	25.12	5.49
DELAWARE INV NATL MUNI INC F	VFL US	15	14.79	1.42
	VKL			
INVESCO VAN KAMPEN S S MN TR	US	15	14.32	4.75
	VMM			
DELAWARE INV MINN MUNI II	US	15	14.84	1.08
	WEA			
WESTERN ASSET PREMIER BOND	US	15	14.29	4.97

## Appendix B

	market vaule	NAV at trading	shares	
Ticker	(M)	date	offer(M)	composition
ACP US	126.31	19.06	6.75	0.981772959
AGC US	234.61	20.00	28.75	0.408017391
AOD US	1178.09	19.06	176	0.351190618
ARK US	198.47	9.23	24	0.89594619
AWP US	699.2	18.43	100	0.379381443
BBN US	1091.82	19.06	50.75	1.128735288
BGX US	226.25	19.06	12.5	0.949632739
BHL US	113.04	15.00	8	0.942
BHY US	40.64	15.04	5.8	0.465884079
BNA US	337.12	15.00	32	0.702333333
BPP US	189.92	23.85	16.3	0.48853391
BPS US	26.68	14.30	13.515	0.13804915
BSL US	270.68	14.82	14	1.304607673
BTZ US	619.86	23.83	47	0.553441487
CEM US	1352.71	19.07	55.5	1.278088786
CGO US	113.78	14.29	8	0.995276417
CH US	154.08	6.49	3.0333	7.826835531
CIF US	57.84	9.23	11	0.569683837
CMU US	122.61	8.98	26	0.52514134
CRF US	32.4	33.06	2.2	0.445471044
CSQ US	1322.64	14.30	140.5	0.65830824
DDF US	66.92	14.20	13	0.362513543
DEX US	146.32	19.06	11.75	0.653345538
DGF US	31.41	13.51	6.7	0.34700664
DHG US	230.31	38.20	45.5	0.13250676
DNP US	2357.64	8.15	120	2.410674847
DSM US	377.31	9.78	35	1.102278703
DUC US	311.96	15.74	24	0.825815332
DVF US	118.53	19.02	11.05	0.563969339
EAD US	666.08	14.30	60	0.776317016
ECF US	91.72	8.26	4.5	2.467581383
EDD US	1246.55	19.05	63.75	1.026442283
EDF US	374.73	23.82	15.1	1.041836956
EEA US	74.34	6.97	7.5	1.422094692
EGF US	176.47	19.06	12	0.771554739
EGX US	4.72	11.38	1.37	0.302746527
EHI US	369.45	14.30	29	0.890884977
EIA US	45.49	14.27	3.55	0.897973687

EIM US	817.31	14.56	57.1	0.983081061
EIP US	37.43	14.28	2.6	1.008134023
EMD US	412.56	14.39	17	1.686465274
EMO US	97.48	18.89	27	0.191126012
EOD US	442.05	19.43	43.5	0.523009211
EOT US	291.82	18.96	13.75	1.119370924
ERC US	614.84	19.06	39	0.827131595
ERH US	99.72	18.90	11.5	0.458799172
ETG US	1046.08	19.10	70	0.782408377
ETJ US	814.22	19.03	65	0.65824811
ETY US	1497.28	20.00	131	0.571480916
EVM US	258.01	14.48	19.1	0.932898962
EXD US	170.79	19.10	10	0.894188482
FAM US	297.14	18.91	16.5	0.95232601
FAV US	74.91	19.10	6.4	0.612810864
FAX US	1962.54	9.19	75	2.847355822
FEN US	285.73	19.10	6.4	2.337450916
FEO US	106.88	19.06	5.9	0.950433066
FFA US	220.71	19.24	18.5	0.620076417
FGF US	275.85	19.06	18.5	0.782309067
FGI US	124.63	19.12	9.65	0.675472066
FHI US	33.77	20.00	8.25	0.204666667
FHO US	39.46	19.07	7.75	0.266995957
FMN US	83.74	14.34	5.85	0.998223843
FMY US	77.82	18.59	4	1.046530393
FT US	155.82	9.30	23	0.728471248
FTF US	352.95	14.33	24.6	1.001225469
GAB US	899.95	6.90	40	3.261586524
GBAB				
US	342.35	19.10	17	1.054357869
GCF US	72.41	4.32	7.35	2.280486269
GDF US	188.49	14.44	13.25	0.985156536
GDO US	273.84	19.06	14	1.026232949
GDV US	1190.27	19.06	73	0.855460047
GFY US	103.96	19.06	7.9	0.690424642
GHI US	282.64	15.00	20	0.942133333
GIM US	1423.81	9.41	110	1.375528934
GLQ US	235.85	19.06	15.25	0.811415203
GLV US	145.88	20.59	8.75	0.809713453
GRR US	57.98	13.97	18	0.230573451
HCF US	432.96	18.06	30	0.799074243
HHY US	61.49	14.93	6.7	0.61470944
HIF US	50.75	13.90	4	0.912769784

HIH US	37.48	71.65	16.5	0.031702933
HIS US	109.58	9.11	21.5	0.55946698
HNW US	152.74	23.82	7.3	0.87839159
HPF US	478.01	23.88	19	1.05353522
HPI US	528.37	23.85	22.5	0.984616818
HSM US	62.55	14.20	9	0.48943662
HTR US	183.75	11.11	22	0.751779723
HTY US	113.08	20.10	8.75	0.642956645
HYB US	222.8	41.80	23	0.23174648
HYT US	367.89	14.33	32	0.802272331
IAE US	204.2	24.02	11	0.772840814
ICB US	152.97	17.17	7	1.272734837
ICS US	51.8	13.91	4.5	0.827542136
IDE US	351.93	19.06	18.5	0.998071524
IFN US	1191.71	13.92	34	2.517980899
IGA US	214.58	19.09	17.25	0.651619711
IIC US	140.68	12.49	13	0.86641621
IID US	81.89	20.00	8.125	0.503938462
IIM US	304.81	12.62	33	0.731907026
IMF US	124.42	19.06	9.6	0.679979888
IMS US	92.02	13.91	9.5	0.696356275
IQC US	108.96	11.68	11.5	0.811197141
IRL US	47.65	10.96	2.5	1.739051095
JCE US	193.12	19.10	15.5	0.652322243
JFC US	87.69	8.82	4.8	2.071075514
JFP US	32.01	14.27	13	0.172551345
JHP US	180.89	14.32	21.28	0.593608235
JOF US	163.96	11.06	2.5	5.929837251
JPC US	775.86	14.33	88	0.615254076
JPS US	940.9	14.31	108.6	0.605444042
JPZ US	436.48	19.40	33.8	0.665649973
JSN US	759.44	19.08	58.5	0.680392051
JTP US	494.44	14.27	56	0.618730604
KED US	207.13	24.28	10	0.853088962
KEF US	117.79	10.72	8.4	1.307762954
KEF US	117.79	10.75	8.4	1.304429679
KF US	451.9	138.79	5.97	0.545393345
KHI US	158.27	22.18	17	0.41974752
KMF US	684.51	23.83	19	1.512144475
KSM US	136.95	11.27	10	1.215173026
KYE US	890.73	23.96	30	1.239190317
KYN US	2037.4	25.00	30	2.716533333
LEO US	385.09	9.57	45	0.894206432

LGI US	129.29	19.06	9.6	0.7065954
LOR US	77.81	18.93	6.575	0.625156922
MAB US	23.62	14.29	1.55	1.06638976
MAV US	310.23	14.25	20.5	1.061976893
MEN US	289.7	9.83	25	1.178840285
MFD US	121.39	19.10	8.5	0.747705574
MFM US	270.62	8.97	31	0.973208185
MFV US	45.3	13.68	6	0.551900585
MIN US	721.57	9.27	200	0.389196332
MIW US	19.42	14.25	1.35	1.00948668
MRF US	72.59	11.54	9.6	0.655239024
MSD US	250.9	14.08	10	1.781960227
MSP US	65.93	19.06	5.5	0.628923018
MSY US	66.83	14.07	5.5	0.863604058
MTT US	250.4	19.10	10.9	1.20274749
MZF US	95.09	14.29	7.1	0.937225874
NBB US	505.74	19.10	23.5	1.126746129
NBD US	146.41	19.09	7	1.095637207
NCO US	108.06	14.64	7	1.054449649
NEV US	259.97	14.33	16.8	1.079860765
NGO US	58	14.31	3.875	1.045963797
NGZ US	101.42	25.00	7	0.579542857
NHS US	241.54	14.30	11	1.536074279
NIE US	65.12	25.12	20.3	0.1277023
NII US	55.48	14.29	3.5	1.10926722
NKG US	64.59	14.29	4.2	1.076177147
NKX US	75.65	14.29	5.45	0.971359968
NMA US	588.16	14.06	35	1.195204227
NMT US	64.56	12.78	4.15	1.21726342
NMY US	148.95	14.09	5.25	2.01358613
NMZ US	312.2	14.33	20.5	1.062754242
NNC US	91.15	14.01	5.6	1.161797696
NNP US	216.27	14.13	6	2.550955414
NNY US	145.62	9.96	11	1.329134721
NOM US	33.13	13.90	2	1.191726619
NPG US	53.3	13.96	3.35	1.139716888
NPI US	834.69	14.15	45	1.310859835
NPN US	17.92	14.33	1.1	1.136839434
NPP US	829.14	14.02	50	1.182796006
NPT US	522.41	14.01	17.5	2.13076374
NPV US	134.37	14.06	5.2	1.837865193
NPY US	203.05	13.99	6.3	2.303799766
NQJ US	268.56	14.13	10.25	1.854279944

NQM US	516.7	14.83	30	1.161384581
NQP US	224.65	14.26	7.5	2.100514259
NQS US	473.2	14.34	32.25	1.023212567
NQU US	731.23	14.15	50	1.033540636
NRK US	47.52	14.29	3.25	1.023200732
NRO US	215.35	14.30	29	0.519291054
NTC US	71.3	13.96	4.6	1.110315186
NTG US	1536.1	23.83	42.4	1.520301032
NTX US	148.85	14.42	6.25	1.651595007
NUJ US	59.75	14.37	4	1.039491997
NUM US	157.18	14.22	10	1.105344585
NUO US	149.23	13.96	4	2.67245702
NUV US	1848.6	9.51	150	1.295899054
NUW US	206.18	14.33	11.5	1.251130192
NVG US	415.75	14.95	7	3.972766364
NVJ US	30.37	14.45	2	1.050865052
NVY US	49.86	15.17	3.325	0.98849629
NWI US	71.8	14.31	4.8	1.045306313
NXE US	39.31	14.29	2.825	0.973760969
NXR US	174.45	13.79	6.5	1.946226362
NYV US	32.95	14.29	2.34	0.985388144
NZX US	63.18	15.17	4.2	0.991618796
PCF US	130.87	8.08	12.5	1.295742574
PCK US	285.17	14.33	26	0.765392667
PCN US	610.5	14.34	31.75	1.340888874
PDT US	602.63	10.35	13	4.478855444
PFL US	28.27	18.35	16.25	0.09480612
PGP US	200.15	23.88	9.3	0.901235569
PHD US	285.59	19.06	22.55	0.664467209
PHF US	109.74	18.42	1.8	3.30980818
PHK US	1467.1	14.31	105	0.976406775
PMO US	487.45	13.49	15	2.408944897
PMX US	343.01	14.31	28.85	0.830847525
PSW US	92.15	23.87	9.6	0.402134828
PSY US	377.97	23.87	36	0.439847787
PTY US	1290.64	4.43	55.5	5.249384825
PYN US	49.79	14.30	5	0.696363636
PZC US	202.92	14.30	19.5	0.727703066
RAP US	57.63	37.19	1.75	0.885420068
RCS US	443.79	12.22	32.2	1.127847638
RFA US	13.21	12.95	1	1.02007722
RIF US	70.73	73.54	6.667	0.144264155
RIT US	107	14.17	9.65	0.782504086

RMT US	236.81	7.39	8.5	3.769959405
RNY US	17.85	14.52	1.3	0.945645264
RVT US	840.56	8.37	10	10.04253286
SCD US	247.07	19.06	29.7	0.436456202
SLA US	107.16	12.02	13.5	0.660380847
SMF US	132.16	23.79	5.6	0.992013451
SPE US	96.88	13.39	14	0.516803585
SRV US	324.09	20.00	8.75	1.851942857
STK US	266.62	19.10	13.1	1.065584909
TEI US	759.94	14.37	41	1.289848431
TPZ US	167.98	19.06	6.85	1.286601665
TSI US	238.81	8.04	20	1.485136816
TYN US	147.8	23.66	4.6	1.358006542
TYY US	498.71	23.79	14	1.497357833
UTG US	566.57	19.10	20	1.483167539
VBF US	219.35	25.12	5	1.746417197
VFL US	70.21	14.79	2.1	2.260536398
VKL US	170.9	14.32	4.4	2.712353987
VMM US	149.1	14.84	6.3	1.594788859
WEA US	146.16	14.29	10	1.022813156

## Appendix C

		shares	
Ticker	Name	offer(M)	fund size
ACP			
US	AVENUE INCOME CREDIT STRATEG	6.75	15.72505306
AGC	ADVENT CLAYMORE GLOBAL		
US	CONVE	28.75	17.17414833
AOD			
US	ALPINE TOTAL DYNAMIC DIVIDEN	176	18.98599455
ARK			
US	BLACKROCK SENIOR HIGH INCOME	24	16.99356439
AWP			
US	ALPINE GLOBAL PREMIER PROPER	100	18.42068074
BBN			
US	BLACKROCK BUILD AMERICA BOND	50.75	17.74242218
BGX	BLACKSTONE/GSO LONG-SHORT		
US	CR	12.5	16.3412392
BHL US	BLACKROCK DEFINED OPPORTUNIT	8	15.8949521
BHY			
US	BLACKROCK HIGH YIELD TRUST	5.8	15.57336848
BNA			
US	BLACKROCK INCOME OPPTY TRST	32	17.28124646
BPP			
US	BLACKROCK CREDIT ALLOC III	16.3	16.60667567
BPS			
US	BLACKROCK PENN STRAT MUNI TR	13.515	16.41931074
BSL US	BLACKSTONE/GSO SENIOR FLOAT	14	16.45456789
BTZ US	BLACKROCK CREDIT ALLOC IV	47	17.66565816
CEM			
US	CLEARBRIDGE ENERGY MLP FUND	55.5	17.83189358
CGO			
US	CALAMOS GLOBAL TOTAL RETURN	8	15.8949521
CH US	ABERDEEN CHILE FUND INC	3.0333	14.92516169
CIF US	MFS INTERMEDIATE HIGH INC FN	11	16.21340583
CMU			
US	MFS HIGH YIELD MUNICIPAL TRU	26	17.0736071
CRF	CORNERSTONE TOTAL RETURN		
US	FND	2.2	14.60396792
CSQ			
US	CALAMOS STRAT TOT RETURN FD	140.5	18.76071805
DDF	DELAWARE INV DIVIDEND & INC	13	16.38045992

US			
DEX	DELAWARE ENHANCED GLOBAL		
US	DIV	11.75	16.2793638
DGF			
US	DELAWARE INV GLB DIV&INC FD	6.7	15.71761808
DHG			
US	DWS HIGH INCOME OPPORTUNITIE	45.5	17.63322288
DNP			
US	DNP SELECT INCOME FUND INC	120	18.6030023
DSM			
US	DREYFUS STRATEGIC MUNI BD FD	35	17.37085862
DUC			
US	DUFF & PHELPS UTIL & CORP BD	24	16.99356439
DVF			
US	BLACKROCK DIVERSIFIED INCM S	11.05	16.21794099
EAD	WELLS FARGO ADVANTAGE		
US	INCOME	60	17.90985512
ECF			
US	ELLSWORTH FUND INC	4.5	15.31958795
EDD	MORGAN STANLEY EMERGING		
US	MARK	63.75	17.97047974
EDF	STONE HARBOR EMERGING		
US	MARKET	15.1	16.5302053
EEA			
US	EUROPEAN EQUITY FUND INC/THE	7.5	15.83041358
EGF	BLACKROCK ENHANCED GOVT		
US	FUND	12	16.30041721
EGX			
US	ENGEX INCORPORATED	1.37	14.1303213
EHI US	WESTERN ASSET GLOBAL HIGH IN	29	17.18280639
EIA US	EATON VANCE CALI MUN BOND II	3.55	15.08245816
EIM US	EATON VANCE MUNICIPAL BOND F	57.1	17.86031467
EIP US	EATON VANCE PA MU BD	2.6	14.771022
EMD	WESTERN ASSET EMERGING		
US	MARKE	17	16.6487239
EMO	CLEARBRIDGE ENERGY MLP		
US	OPPOR	27	17.11134742
EOD	WELLS FARGO ADVANTAGE		
US	GLOBAL	43.5	17.5882715
EOT			
US	EATON VANCE NATIONAL MUNICIP	13.75	16.43654938
ERC			
US	WELLS FARGO ADVANTAGE MULTI	39	17.4790722

ERH			
US	WELLS FARGO ADVANTAGE UTILIT	11.5	16.25785759
ETG			
US	EATON VANCE T/A GL DVD INCM	70	18.0640058
ETJ US	EATON VANCE RISK-MANAGED DIV	65	17.98989783
ETY US	EATON VANCE TAX-MANAGED DIVE	131	18.69070788
EVM			
US	EATON VANCE CAL MUNI BOND	19.1	16.76519889
EXD			
US	EATON VANCE TAX-ADVANTAGED B	10	16.11809565
FAM			
US	FIRST TRUST ABERDEEN GLOBAL	16.5	16.61887094
FAV US	FIRST TRUST ACTIVE DIVIDEND	6.4	15.67180855
FAX US	ABERDEEN ASIA-PAC INCOME FD	75	18.13299867
FEN			
US	ENERGY INCOME AND GROWTH FD	6.4	15.67180855
FEO			
US	FIRST TRUST ABERDEEN EMG OPP	5.9	15.59046291
FFA US	FIRST TRUST ENH EQUITY INC	18.5	16.73328129
FGF			
US	SUNAMERICA FOCUSED ALPHA GR	18.5	16.73328129
FGI US	SUNAMERICA FOCUSED ALPHA L/C	9.65	16.08246847
FHI US	FIRST TRUST STRAT H/I FUND	8.25	15.92572376
FHO			
US	FIRST TRUST STRAT H/I FUND 3	7.75	15.8632034
FMN			
US	FEDERATED PREMIER MUNI INC	5.85	15.58195222
FMY			
US	FIRST TRUST MORTGAGE INCOME	4	15.20180492
FT US	FRANKLIN UNIVERSAL TRUST	23	16.95100477
FTF US	FRANKLIN TEMPLETON LTD DUR	24.6	17.018257
GAB			
US	GABELLI EQUITY TRUST	40	17.50439001
GBAB			
US	GUGGENHEIM BUILD AMERICA BON	17	16.6487239
GCF			
US	GLOBAL INCOME&CURR FUND INC	7.35	15.81021087
GDF	WESTERN ASSET GLOBAL		
US	PARTNER	13.25	16.39950811
GDO			
US	WESTERN ASSET GL CORP DEF OP	14	16.45456789
GDV			
US	GABELLI DIVIDEND & INCOME TR	73	18.10597

GFY			
US	WESTERN ASSET VARIABLE RATE	7.9	15.88237332
GHI US	GLOBAL HIGH INCOME FUND INC	20	16.81124283
	TEMPLETON GLOBAL INCOME		
GIM US	FUND	110	18.51599092
GLQ			
US	CLOUGH GLOBAL EQUITY FUND	15.25	16.54009006
GLV			
US	CLOUGH GLOBAL ALLOCATION FD	8.75	15.98456426
GRR			
US	ASIA TIGERS FUND INC	18	16.70588232
HCF			
US	HIGHLAND CREDIT STRATEGIES F	30	17.21670794
HHY			
US	HELIOS HIGH YIELD FUND	6.7	15.71761808
HIF US	WESTERN ASSET HIGH INC FD	4	15.20180492
HIH US	HELIOS HIGH INCOME FUND INC	16.5	16.61887094
HIS US	BLACKROCK HIGH INCOME SHARES	21.5	16.88356349
HNW			
US	PIONEER DIVERSIFIED HIGH INC	7.3	15.80338491
HPF			
US	JOHN HANCOCK PFD INCOME II	19	16.75994954
HPI US	JOHN HANCOCK PFD INCOME FD	22.5	16.92902587
HSM			
US	HELIOS STRATEGIC MORTGAGE IN	9	16.01273514
HTR			
US	HELIOS TOTAL RETURN FUND INC	22	16.90655301
HTY			
US	JOHN HANCOCK TAX-ADVANTAGED	8.75	15.98456426
HYB			
US	NEW AMERICA HIGH INCOME FUND	23	16.95100477
HYT			
US	BLACKROCK CORPORATE HY FD VI	32	17.28124646
IAE US	ING ASIA PACIFIC HIGH DIVIDE	11	16.21340583
ICB US	MORGAN STANLEY INCOME SECS	7	15.76142071
ICS US	INVESCO INSURED CALIFORNIA M	4.5	15.31958795
IDE US	ING INFRASTRUCTURE INDUSTRIA	18.5	16.73328129
IFN US	INDIA FUND INC	34	17.34187108
IGA US	ING GLOBAL ADVANTAGE AND PRE	17.25	16.6633227
IIC US	INVESCO CALIFORNIA INSURED M	13	16.38045992
IID US	ING INTERNATIONAL HIGH DIVID	8.125	15.91045629
IIM US	INVESCO INSURED MUNICIPAL IN	33	17.31201812
IMF US	WESTERN ASSET INFLATION MANA	9.6	16.07727366

IMS US	INVESCO INSURED MUNICIPAL SE	9.5	16.06680236
IQC US	INVESCO CALIFORNIA QUALITY M	11.5	16.25785759
IRL US	NEW IRELAND FUND INC	2.5	14.73180129
JCE US	NUVEEN CORE EQUITY ALPHA FUN	15.5	16.55635058
JFC US	JF CHINA REGION FUND INC	4.8	15.38412648
JFP US	NUVEEN TAX-ADVANTAGED FLOATI	13	16.38045992
JHP US	NUVEEN QUALITY PREFERRED III	21.28	16.87327822
JOF US	JAPAN SMALLER CAPITALIZATION	2.5	14.73180129
JPC US	NUVEEN MULTI-ST INC & GTH	88	18.29284737
JPS US	NUVEEN QUALITY PREFERRED II	108.6	18.50318197
JPZ US	NUVEEN EQUITY PREMIUM INCOME	33.8	17.33597136
JSN US	NUVEEN EQUITY PREM OPP FUND	58.5	17.88453731
JTP US	NUVEEN QUALITY PREFERRED INC	56	17.84086225
KED	KAYNE ANDERSON ENERGY		
US	DEVELO	10	16.11809565
KEF US	KOREA EQUITY FUND	8.4	15.94374226
KEF US	KOREA EQUITY FUND	8.4	15.94374226
KF US	KOREA FUND INC	5.97	15.60225749
KHI US	DWS HIGH INCOME TRUST	17	16.6487239
KMF	KAYNE ANDERSON		
US	MIDSTEAM/ENER	19	16.75994954
KSM			
US	DWS STRATEGIC MUNI INCOME TR	10	16.11809565
KYE			
US	KAYNE ANDERSON ENERGY TOT RT	30	17.21670794
KYN	KAYNE ANDERSON MLP		
US	INVESTMEN	30	17.21670794
LEO			
US	DREYFUS STRATEGIC MUNICIPALS	45	17.62217305
LGI US	LAZARD GLOBAL TOT RT & INC	9.6	16.07727366
LOR			
US	LAZARD WORLD DIVIDEND & INCO	6.575	15.69878514
MAB	EATON VANCE MASSACH MUN		
US	BOND	1.55	14.25376549
MAV			
US	PIONEER MUNI HI INC ADV TRST	20.5	16.83593544
MEN			
US	BLACKROCK MUNIENHANCED FUND	25	17.03438638
MFD			
US	MACQUARIE/FT GL INT/UT DV IN	8.5	15.95557672
MFM			
US	MFS MUNICIPAL INCOME TRUST	31	17.24949776
MFV	MFS SPECIAL VALUE TRUST	6	15.60727003

US			
MIN US	MFS INTERMEDIATE INC TRUST	200	19.11382792
MIW			
US	EATON VANCE MICHI MUNI BND	1.35	14.11561515
MRF			
US	AMERICAN INCOME FUND INC	9.6	16.07727366
MSD	MORGAN STANLEY EMRG MKT		
US	DEBT	10	16.11809565
MSP			
US	MADISON STRATEGIC SECTR PREM	5.5	15.52025865
MSY			
US	INVESCO HIGH YIELD INVEST FD	5.5	15.52025865
MTT			
US	WESTERN ASSET MUNCIPAL DEFIN	10.9	16.20427335
MZF			
US	MANAGED DURATION INVESTMENT	7.1	15.77560534
NBB			
US	NUVEEN BUILD AMERICAN BOND	23.5	16.97251098
NBD			
US	NUVEEN BUILD AMERICA BOND OP	7	15.76142071
NCO			
US	NUVEEN CAL MUNI MKT OPPOR FD	7	15.76142071
NEV			
US	NUVEEN ENHANCED MUNICIPAL VA	16.8	16.63688944
NGO			
US	NUVEEN CONNECTICUT DVD ADV 3	3.875	15.17005622
NGZ			
US	AGIC GLOBAL EQUITY & CONVERT	7	15.76142071
NHS			
US	NEUBERGER BERMAN HIGH YIELD	11	16.21340583
NIE US	AGIC EQUITY & CONVERTIBLE IN	20.3	16.82613144
NII US	NUVEEN NORTH CAROLINA DVD 3	3.5	15.06827353
NKG			
US	NUVEEN GEORGIA DVD ADV MU 2	4.2	15.25059508
NKX			
US	NUVEEN INS CA T/F ADV MUN FD	5.45	15.51112617
NMA			
US	NUVEEN MUNI ADVANTAGE FUND	35	17.37085862
NMT			
US	NUVEEN MA PREMIUM INC MUNI	4.15	15.23861889
NMY			
US	NUVEEN MD PREMIUM INC MUNI	5.25	15.47373863
NMZ	NUVEEN MUNI HIGH INCM OPPORT	20.5	16.83593544

US			
NNC			
US	NUVEEN NC PREMIUM INC MUNI	5.6	15.53827716
NNP			
US	NUVEEN NEW YORK PERF+ MUNI	6	15.60727003
NNY			
US	NUVEEN NY MUNI VALUE FUND	11	16.21340583
NOM			
US	NUVEEN MO PREMIUM INC MUNI	2	14.50865774
NPG			
US	NUVEEN GEORGIA PREMIUM INC	3.35	15.0244709
NPI US	NUVEEN PREMIUM INC MUNI FUND	45	17.62217305
NPN			
US	NUVEEN PENNSYLVANIA MUNICIPA	1.1	13.91082074
NPP	NUVEEN PERFORMANCE PLUS		
US	MUNI	50	17.72753356
NPT			
US	NUVEEN PREMIUM INC MUNI FD 4	17.5	16.67771144
NPV			
US	NUVEEN VIRGINIA PREMIUM INC	5.2	15.46416918
NPY			
US	NUVEEN PA PREMIUM INC MUNI 2	6.3	15.65606019
NQJ			
US	NUVEEN NJ INV QUAL MUNI FD	10.25	16.14278826
NQM			
US	NUVEEN INV QUALITY MUNI FD	30	17.21670794
NQP			
US	NUVEEN PENN INV QUAL MUNI FD	7.5	15.83041358
NQS			
US	NUVEEN SELECT QUALTY MUNI FD	32.25	17.2890286
NQU			
US	NUVEEN QUALITY INCOME MUNI	50	17.72753356
NRK			
US	NUVEEN INS NY T/F ADV MUNI	3.25	14.99416555
NRO	NEUBERGER BERMAN REAL		
US	ESTATE	29	17.18280639
NTC	NUNCER CONSTRUCTION TO THE CONTROL OF THE CONTROL O	4.0	45.04450000
US	NUVEEN CONNECTICUT PREM INC	4.6	15.34156686
NTG	TORTOIGE MESSELVE VIC	40.4	47.50005005
US	TORTOISE MLP FUND INC	42.4	17.56265892
NTX	NUNGEN TEXAS SHARE STORES	2.2-	45.0400000
US	NUVEEN TEXAS QUALITY INC MUN	6.25	15.64809202
NUJ US	NUVEEN NJ DVD ADV MUNI FD 2	4	15.20180492

NUM			
US	NUVEEN MICH QUALITY INC MUNI	10	16.11809565
NUO			
US	NUVEEN OHIO QUALITY INC MUNI	4	15.20180492
NUV			
US	NUVEEN MUNICIPAL VALUE FUND	150	18.82614585
NUW			
US	NUVEEN MUNICIPAL VALUE FD 2	11.5	16.25785759
NVG			
US	NUVEEN INSD DVD ADV MUNI FD	7	15.76142071
NVJ US	NUVEEN OH DVD ADV MUNI FD 3	2	14.50865774
NVY			
US	NUVEEN PA DVD ADV MUNI FD 2	3.325	15.01698023
NWI US	NUVEEN MARYLAND DVD ADV MU 3	4.8	15.38412648
NXE			
US	NUVEEN ARIZONA DVD ADV MUN 3	2.825	14.85401892
NXR			
US	NUVEEN SELECT T/F INC III	6.5	15.68731273
NYV			
US	NUVEEN NY MUNI VALUE FUND 2	2.34	14.66566149
NZX			
US	NUVEEN GEORGIA DVD ADV MUNI 2	4.2	15.25059508
PCF			
US	PUTNAM HIGH INCOME SECURITIE	12.5	16.3412392
PCK			
US	PIMCO CALIFORNIA MUNICIPA II	26	17.0736071
PCN			
US	PIMCO CORPORATE INCOME FUND	31.75	17.27340328
PDT			
US	JOHN HAN PREMIUM DIVIDEND FD	13	16.38045992
PFL US	PIMCO INCOME STRATEGY FUND	16.25	16.60360347
PGP			
US	PIMCO GLOBAL STOCKSPLUS & IN	9.3	16.04552496
PHD			
US	PIONEER FLOATING RATE TRUST	22.55	16.93124562
PHF			
US	PACHOLDER HIGH YIELD FUND	1.8	14.40329722
PHK			
US	PIMCO HIGH INCOME FUND	105	18.46947091
PMO			
US	PUTNAM MUNI OPPORTUNITIES TR	15	16.52356076
PMX			
US	PIMCO MUNI INCOME FUND III	28.85	17.17762055

PSW			
US	BLACKROCK CREDIT ALLOCAT I	9.6	16.07727366
PSY			
US	BLACKROCK CREDIT ALLOCAT II	36	17.3990295
PTY US	PIMCO CORPORATE OPPORTUNITY	55.5	17.83189358
PYN			
US	PIMCO NEW YORK MUNICIPAL III	5	15.42494847
PZC			
US	PIMCO CALIFORNIA MUNICIP III	19.5	16.78592502
RAP			
US	RMR ASIA PACIFIC REAL ESTATE	1.75	14.37512635
RCS			
US	PIMCO STRATEGIC GLBL GOVT	32.2	17.28747701
RFA			
US	BLACKROCK INVESTMENT QUALITY	1	13.81551056
RIF US	RMR REAL ESTATE INCOME FUND	6.667	15.71268054
RIT US	LMP REAL ESTATE INCOME FUND	9.65	16.08246847
RMT			
US	ROYCE MICRO-CAP TRUST INC	8.5	15.95557672
RNY			
US	BLACKROCK NEW YORK INVT QUAL	1.3	14.07787482
RVT			
US	ROYCE VALUE TRUST	10	16.11809565
SCD			
US	LMP CAPITAL AND INCOME FUND	29.7	17.2066576
SLA US	AMERICAN SELECT PORTFOLIO	13.5	16.41820024
SMF			
US	SALIENT MLP & ENERGY INFRAST	5.6	15.53827716
SPE			
US	SPECIAL OPPORTUNITIES FUND	14	16.45456789
SRV			
US	CUSHING MLP TOTAL RETURN FUN	8.75	15.98456426
STK US	COLUMBIA SELIG PREM TECH	13.1	16.38812279
TEIUS	TEMPLETON EMERG MKTS INC FD	41	17.52908262
TPZ US	TORTOISE POWER AND ENERGY IN	6.85	15.73975921
TSI US	TCW STRATEGIC INCOME FUND IN	20	16.81124283
TYN			
US	TORTOISE NORTH AMERICAN ENER	4.6	15.34156686
TYY US	TORTOISE ENERGY CAPITAL CORP	14	16.45456789
UTG			
US	REAVES UTILITY INCOME FUND	20	16.81124283
VBF US	INVESCO VAN KAMPEN BOND FUND	5	15.42494847
VFL US	DELAWARE INV NATL MUNI INC F	2.1	14.5574479

VKL US	INVESCO VAN KAMPEN S S MN TR	4.4	15.2971151
VMM			
US	DELAWARE INV MINN MUNI II	6.3	15.65606019
WEA			
US	WESTERN ASSET PREMIER BOND	10	16.11809565

## Appendix D

Ticker	NAV(TD)	NAV(T+1Y)	Dividend	performance
ACP US	19.06	17.32	0.130000	-0.084470094
AGC US	20.00	6.50	0.15	-0.6675
AOD US	19.06	6.98	0.180000	-0.624344176
ARK US	9.23	9.10	0.102721	-0.002955471
AWP US	18.43	4.70	0.122457	-0.738336571
BBN US	19.06	21.27	0.118300	0.122156348
BGX US	19.06	17.96	0.108000	-0.05204617
BHL US	15.00	13.13	0.112500	-0.117166667
BHY US	15.04	9.41	0.126563	-0.365920013
BNA US	15.00	12.72	0.109400	-0.144706667
BPP US	23.85	25.88	0.166667	0.092103438
BPS US	14.30	14.62	0.076563	0.027731678
BSL US	14.82	14.92	0.110000	0.01417004
BTZ US	23.83	19.38	0.156250	-0.180182543
CEM US	19.07	21.35	0.350000	0.137912952
CGO US	14.29	17.09	0.075000	0.201189643
CH US	6.49	8.22	0.159320	0.291112481
CIF US	9.23	7.82	0.070000	-0.145178765
CMU US	8.98	9.02	0.045000	0.009465479
CRF US	33.06	33.79	0.459070	0.03596703
CSQ US	14.30	14.56	0.075000	0.023426573
DDF US	14.20	12.69	0.088000	-0.100140845
DEX US	19.06	9.25	0.142000	-0.507240294
DGF US	13.51	14.35	0.088000	0.068689859
DHG US	38.20	32.44	0.066600	-0.149041885
DNP US	8.15	8.86	0.055000	0.093865031
DSM US	9.78	10.01	0.065000	0.030163599
DUC US	15.74	14.52	0.098000	-0.071283355
DVF US	19.02	18.70	0.116667	-0.010690484
EAD US	14.30	15.67	0.137500	0.10541958
ECF US	8.26	8.49	0.124000	0.042857143
EDD US	19.05	13.52	0.600000	-0.258792651
EDF US	23.82	24.75	0.180000	0.046599496
EEA US	6.97	12.16	0.450000	0.809182209
EGF US	19.06	18.50	0.116667	-0.023259864
EGX US	11.38	12.26	0.512340	0.122349736
EHI US	14.30	15.22	0.106250	0.071765734
EIA US	14.27	14.87	0.075000	0.047302032
EIM US	14.56	14.98	0.075625	0.034040179

EIP US	14.28	14.78	0.075602	0.040308263
EMD US	14.39	10.32	0.412500	-0.254169562
EMO US	18.89	18.15	0.330000	-0.021704606
EOD US	19.43	11.12	0.500000	-0.401955739
EOT US	18.96	19.88	0.103334	0.053973312
ERC US	19.06	20.76	0.130840	0.096056663
ERH US	18.90	21.18	0.100000	0.125925926
ETG US	19.10	22.17	0.102500	0.166099476
ETJ US	19.03	17.34	0.450000	-0.065160273
ETY US	20.00	18.87	0.462500	-0.033375
EVM US	14.48	14.62	0.075000	0.014848066
EXD US	19.10	17.89	0.425000	-0.041099476
FAM US	18.91	19.24	0.130000	0.024325754
FAV US	19.10	10.18	0.460000	-0.442931937
FAX US	9.19	9.53	0.074054	0.045054842
FEN US	19.10	22.33	0.325000	0.186125654
FEO US	19.06	21.69	0.350000	0.156348374
FFA US	19.24	18.65	0.535000	-0.002858628
FGF US	19.06	21.71	0.300000	0.154774397
FGI US	19.12	20.21	0.300000	0.072698745
FHI US	20.00	11.66	0.019510	-0.4160245
FHO US	19.07	5.35	0.019510	-0.718431568
FMN US	14.34	14.82	0.083750	0.03931311
FMY US	18.59	18.37	0.104200	-0.006229155
FT US	9.30	8.76	0.093000	-0.048064516
FTF US	14.33	14.74	0.098800	0.035505932
GAB US	6.90	7.38	0.127621	0.089056552
GBAB				
US	19.10	21.41	0.117000	0.127068063
GCF US	4.32	4.60	0.070000	0.081018519
GDF US	14.44	12.12	0.118750	-0.152441136
GDO US	19.06	19.66	0.130000	0.038300105
GDV US	19.06	20.12	0.300000	0.07135362
GFY US	19.06	19.33	0.087500	0.018756558
GHI US	15.00	12.27	0.260000	-0.164666667
GIM US	9.41	8.57	0.040000	-0.08501594
GLQ US	19.06	22.06	0.300000	0.173137461
GLV US	20.59	23.05	0.300000	0.134045653
GRR US	13.97	11.88	0.015000	-0.14853257
HCF US	18.06	18.00	0.142063	0.004493851
HHY US	14.93	12.53	0.415000	-0.132953784
HIF US	13.90	12.88	0.125000	-0.064388489
HIH US	71.65	75.44	0.600000	0.061270063

HIS US	9.11	7.41	0.105000	-0.175082327
HNW US	23.82	13.26	0.198000	-0.435012594
HPF US	23.88	25.86	0.180000	0.090452261
HPI US	23.85	25.55	0.180000	0.078825996
HSM US	14.20	14.38	0.108000	0.02028169
HTR US	11.11	10.70	0.105000	-0.027452745
HTY US	20.10	12.35	0.090000	-0.381094527
HYB US	41.80	30.82	0.729066	-0.245348877
HYT US	14.33	15.71	0.083150	0.102103978
IAE US	24.02	12.73	0.453000	-0.451165695
ICB US	17.17	18.33	0.155000	0.07658707
ICS US	13.91	15.35	0.060000	0.107836089
IDE US	19.06	17.81	0.450000	-0.041972718
IFN US	13.92	8.94	0.132000	-0.348275862
IGA US	19.09	20.87	0.155000	0.10136197
IIC US	12.49	13.96	0.072500	0.123498799
IID US	20.00	9.84	0.163000	-0.49985
IIM US	12.62	14.25	0.075000	0.135103011
IMF US	19.06	18.50	0.087500	-0.024790136
IMS US	13.91	15.43	0.062500	0.113767074
IQC US	11.68	13.47	0.067500	0.159032534
IRL US	10.96	9.63	0.330000	-0.091240876
JCE US	19.10	11.74	0.430000	-0.362827225
JFC US	8.82	14.81	0.044294	0.683637044
JFP US	14.27	14.64	0.065500	0.03051857
JHP US	14.32	15.30	0.103000	0.075628492
JOF US	11.06	7.94	0.040000	-0.278481013
JPC US	14.33	15.31	0.100500	0.075401256
JPS US	14.31	15.90	0.105000	0.118448637
JPZ US	19.40	18.48	0.142000	-0.040103093
JSN US	19.08	18.36	0.148000	-0.029979036
JTP US	14.27	15.05	0.103000	0.061878066
KED US	24.28	24.46	0.410000	0.024299835
KEF US	10.72	8.62	0.253904	-0.172131386
KEF US	10.75	8.67	0.253904	-0.169869395
KF US	138.79	186.47	0.099329	0.34424259
KHI US	22.18	17.04	0.230000	-0.221370604
KMF US	23.83	23.74	0.375000	0.012172088
KSM US	11.27	11.71	0.075000	0.045696539
KYE US	23.96	25.10	0.270000	0.05884808
KYN US	25.00	24.87	0.250000	0.0048
LEO US	9.57	9.39	0.065000	-0.012016719
LGI US	19.06	21.10	0.104200	0.112497377

LOR US	18.93	22.83	0.116700	0.212187005
MAB US	14.29	14.84	0.075000	0.043736879
MAV US	14.25	14.54	0.093750	0.026929825
MEN US	9.83	11.33	0.059080	0.158604273
MFD US	19.10	23.32	0.300000	0.236649215
MFM US	8.97	9.46	0.052000	0.060423634
MFV US	13.68	12.17	0.137500	-0.100328947
MIN US	9.27	8.88	0.087500	-0.032632147
MIW US	14.25	14.85	0.075000	0.047368421
MRF US	11.54	9.45	0.110000	-0.171577123
MSD US	14.08	12.21	0.160000	-0.121448864
MSP US	19.06	20.25	0.150000	0.070304302
MSY US	14.07	11.96	0.220000	-0.134328358
MTT US	19.10	20.50	0.090000	0.078010471
MZF US	14.29	14.49	0.070000	0.018894332
NBB US	19.10	20.82	0.117000	0.09617801
NBD US	19.09	21.70	0.126000	0.143321111
NCO US	14.64	15.65	0.085000	0.074795082
NEV US	14.33	13.18	0.076000	-0.074947662
NGO US	14.31	14.68	0.065000	0.030398323
NGZ US	25.00	12.32	0.640500	-0.48158
NHS US	14.30	15.59	0.137500	0.100209864
NIE US	25.12	13.63	0.562500	-0.435011943
NII US	14.29	14.58	0.067000	0.024982505
NKG US	14.29	14.53	0.067000	0.021483555
NKX US	14.29	14.67	0.075500	0.031875437
NMA US	14.06	14.04	0.088500	0.004871977
NMT US	12.78	11.76	0.063500	-0.074843505
NMY US	14.09	11.37	0.063000	-0.188573456
NMZ US	14.33	14.99	0.089000	0.052267969
NNC US	14.01	11.20	0.060000	-0.196288365
NNP US	14.13	13.67	0.087500	-0.02636235
NNY US	9.96	9.92	0.057000	0.001706827
NOM US	13.90	11.20	0.059500	-0.189964029
NPG US	13.96	11.23	0.062000	-0.191117479
NPI US	14.15	14.85	0.067500	0.054240283
NPN US	14.33	14.76	0.065000	0.034542917
NPP US	14.02	13.80	0.060500	-0.011376605
NPT US	14.01	12.02	0.069400	-0.137087794
NPV US	14.06	11.54	0.065000	-0.174608819
NPY US	13.99	11.65	0.065000	-0.162616154
NQJ US	14.13	15.01	0.082500	0.068117481
NQM US	14.83	15.73	0.089000	0.066689144

NQP US	14.26	15.50	0.083000	0.092776999
NQS US	14.34	15.28	0.085000	0.071478382
NQU US	14.15	15.15	0.084000	0.076607774
NRK US	14.29	14.71	0.072500	0.034464661
NRO US	14.30	17.06	0.100000	0.2
NTC US	13.96	11.30	0.060500	-0.186210602
NTG US	23.83	24.25	0.360000	0.032731851
NTX US	14.42	13.75	0.075500	-0.041227462
NUJ US	14.37	15.30	0.076500	0.070041754
NUM US	14.22	14.86	0.075500	0.050316456
NUO US	13.96	15.38	0.073000	0.106590258
NUV US	9.51	10.19	0.060000	0.077812829
NUW US	14.33	15.48	0.075000	0.085484997
NVG US	14.95	15.74	0.077500	0.058026756
NVJ US	14.45	15.43	0.073000	0.072871972
NVY US	15.17	15.65	0.076500	0.036684245
NWI US	14.31	14.55	0.065500	0.021348707
NXE US	14.29	14.37	0.067000	0.010286914
NXR US	13.79	13.08	14.610000	1.007976795
NYV US	14.29	14.93	0.064000	0.04926522
NZX US	15.17	15.18	0.055000	0.004284773
PCF US	8.08	8.34	0.071000	0.040965347
PCK US	14.33	14.32	0.081250	0.004972087
PCN US	14.34	13.29	0.106250	-0.065812413
PDT US	10.35	12.15	0.110000	0.184541063
PFL US	18.35	18.78	0.073648	0.027446757
PGP US	23.88	27.57	0.183350	0.162200586
PHD US	19.06	19.02	0.095800	0.002927597
PHF US	18.42	17.62	0.180000	-0.033659066
PHK US	14.31	15.75	0.121875	0.109145702
PMO US	13.49	14.11	0.077500	0.051704967
PMX US	14.31	14.63	0.083100	0.028169113
PSW US	23.87	24.02	0.166667	0.013266318
PSY US	23.87	23.76	0.083702	-0.001101718
PTY US	4.43	5.59	0.019510	0.266255079
PYN US	14.30	14.78	0.080000	0.039160839
PZC US	14.30	14.27	0.080000	0.003496503
RAP US	37.19	36.67	2.962963	0.065565106
RCS US	12.22	11.68	0.074000	-0.038134206
RFA US	12.95	14.52	0.065600	0.126301158
RIF US	73.54	84.82	0.512821	0.160389741
RIT US	14.17	18.21	0.106300	0.29261115
RMT US	7.39	8.89	0.270000	0.239512855

RNY US	14.52	11.50	0.065600	-0.203471074
RVT US	8.37	10.20	0.300000	0.254480287
SCD US	19.06	20.17	0.100000	0.063483736
SLA US	12.02	12.81	0.093750	0.073523295
SMF US	23.79	23.40	0.400000	0.000420345
SPE US	13.39	14.94	0.075000	0.121359223
SRV US	20.00	3.72	0.300000	-0.799
STK US	19.10	20.45	0.462500	0.094895288
TEI US	14.37	11.32	0.325000	-0.189631176
TPZ US	19.06	24.74	0.125000	0.304564533
TSI US	8.04	8.32	0.030000	0.038557214
TYN US	23.66	24.34	0.260000	0.039729501
TYY US	23.79	27.38	0.235000	0.160781841
UTG US	19.10	21.84	0.096700	0.148518325
VBF US	25.12	25.31	0.170000	0.01433121
VFL US	14.79	11.63	0.067500	-0.209093982
VKL US	14.32	11.62	0.069000	-0.18372905
VMM US	14.84	11.62	0.068750	-0.212348383
WEA US	14.29	15.01	0.106250	0.057820154

## Appendix E

	trading	shares	
Ticker	volume(M)	offer(M)	Turnover
ACP US	0.335	6.75	0.04962963
AGC US	0.283	28.75	0.009843478
AOD US	1.542	176	0.008761364
ARK US	0.0625	24	0.002604167
AWP US	0.985	100	0.00985
BBN US	0.793	50.75	0.015625616
BGX US	0.571	12.5	0.04568
BHL US	0.241	8	0.030125
BHY US	0.0188	5.8	0.003241379
BNA US	0.18	32	0.005625
BPP US	0.105	16.3	0.006441718
BPS US	0.185	13.515	0.013688494
BSL US	0.261	14	0.018642857
BTZ US	0.256	47	0.005446809
CEM US	0.382	55.5	0.006882883
CGO US	0.381	8	0.047625
CH US	2.478	3.0333	0.816932054
CIF US	0.338	11	0.030727273
CMU US	3.132	26	0.120461538
CRF US	0.001415	2.2	0.000643182
CSQ US	0.388	140.5	0.002761566
DDF US	0.0912	13	0.007015385
DEX US	0.459	11.75	0.03906383
DGF US	0.24	6.7	0.035820896
DHG US	0.117	45.5	0.002571429
DNP US	1.828	120	0.015233333
DSM US	0.302	35	0.008628571
DUC US	0.122	24	0.005083333
DVF US	0.138	11.05	0.012488688
EAD US	0.373	60	0.006216667
ECF US	0.256	4.5	0.056888889
EDD US	0.289	63.75	0.004533333
EDF US	0.841	15.1	0.055695364
EEA US	0.407	7.5	0.054266667
EGF US	0.144	12	0.012
EGX US	0.0015	1.37	0.001094891
EHI US	0.175	29	0.006034483
EIA US	0.2	3.55	0.056338028

EIM US	0.216	57.1	0.003782837
EIP US	0.093	2.6	0.035769231
EMD US	0.326	17	0.019176471
EMO US	0.996	27	0.036888889
EOD US	0.85	43.5	0.01954023
EOT US	0.526	13.75	0.038254545
ERC US	0.16	39	0.004102564
ERH US	0.163	11.5	0.014173913
ETG US	0.44	70	0.006285714
ETJ US	0.812	65	0.012492308
ETY US	0.509	131	0.003885496
EVM US	0.681	19.1	0.03565445
EXD US	0.306	10	0.0306
FAM US	0.538	16.5	0.032606061
FAV US	0.228	6.4	0.035625
FAX US	0.04511	75	0.000601467
FEN US	0.144	6.4	0.0225
FEO US	0.13	5.9	0.022033898
FFA US	0.368	18.5	0.019891892
FGF US	0.172	18.5	0.009297297
FGI US	0.263	9.65	0.027253886
FHI US	0.254	8.25	0.030787879
FHO US	0.137	7.75	0.017677419
FMN US	0.087	5.85	0.014871795
FMY US	0.0597	4	0.014925
FT US	0.789	23	0.034304348
FTF US	0.344	24.6	0.01398374
GAB US	0.434	40	0.01085
GBAB			
US	0.383	17	0.022529412
GCF US	0.0094	7.35	0.001278912
GDF US	0.252	13.25	0.019018868
GDO US	0.159	14	0.011357143
GDV US	0.855	73	0.011712329
GFY US	0.13	7.9	0.016455696
GHI US	0.0012	20	0.00006
GIM US	6.204	110	0.0564
GLQ US	0.0242	15.25	0.001586885
GLV US	0.786	8.75	0.089828571
GRR US	0.516	18	0.028666667
HCF US	0.43	30	0.014333333
HHY US	0.189	6.7	0.028208955
HIF US	0.39	4	0.0975

HIH US	0.115	16.5	0.006969697
HIS US	0.194	21.5	0.009023256
HNW US	0.147	7.3	0.020136986
HPF US	0.148	19	0.007789474
HPI US	0.334	22.5	0.014844444
HSM US	0.0215	9	0.002388889
HTR US	0.169	22	0.007681818
HTY US	1.146	8.75	0.130971429
HYB US	1.146	23	0.049826087
HYT US	0.156	32	0.004875
IAE US	0.208	11	0.018909091
ICB US	0.0099	7	0.001414286
ICS US	0.0039	4.5	0.000866667
IDE US	0.449	18.5	0.02427027
IFN US	2.036	34	0.059882353
IGA US	0.507	17.25	0.029391304
IIC US	0.0004	13	3.07692E-05
IID US	0.812	8.125	0.099938462
IIM US	0.003	33	9.09091E-05
IMF US	0.134	9.6	0.013958333
IMS US	0.006	9.5	0.000631579
IQC US	0.0004	11.5	3.47826E-05
IRL US	1.372	2.5	0.5488
JCE US	0.284	15.5	0.018322581
JFC US	0.498	4.8	0.10375
JFP US	0.555	13	0.042692308
JHP US	249	21.28	11.70112782
JOF US	0.3	2.5	0.12
JPC US	0.25	88	0.002840909
JPS US	0.226	108.6	0.002081031
JPZ US	0.303	33.8	0.008964497
JSN US	0.379	58.5	0.006478632
JTP US	0.322	56	0.00575
KED US	2.642	10	0.2642
KEF US	0.749	8.4	0.089166667
KEF US	0.749	8.4	0.089166667
KF US	0.019113	5.97	0.003201508
KHI US	0.6765	17	0.039794118
KMF US	0.526	19	0.027684211
KSM US	0.492	10	0.0492
KYE US	0.714	30	0.0238
KYN US	1.261	30	0.042033333
LEO US	5.196	45	0.115466667

LGI US	0.139	9.6	0.014479167
LOR US	0.139	6.575	0.021140684
MAB US	0.0839	1.55	0.054129032
MAV US	0.819	20.5	0.03995122
MEN US	0.0033	25	0.000132
MFD US	0.136	8.5	0.016
MFM US	1.077	31	0.034741935
MFV US	0.0857	6	0.014283333
MIN US	33.945	200	0.169725
MIW US	0.0065	1.35	0.004814815
MRF US	0.251	9.6	0.026145833
MSD US	0.592	10	0.0592
MSP US	0.721	5.5	0.131090909
MSY US	0.678	5.5	0.123272727
MTT US	0.266	10.9	0.02440367
MZF US	0.816	7.1	0.114929577
NBB US	0.441	23.5	0.018765957
NBD US	0.203	7	0.029
NCO US	0.0725	7	0.010357143
NEV US	0.26	16.8	0.01547619
NGO US	0.0159	3.875	0.004103226
NGZ US	0.852	7	0.121714286
NHS US	0.272	11	0.024727273
NIE US	0.163	20.3	0.008029557
NII US	0.0082	3.5	0.002342857
NKG US	0.226	4.2	0.053809524
NKX US	0.0469	5.45	0.008605505
NMA US	0.118	35	0.003371429
NMT US	0.006	4.15	0.001445783
NMY US	0.0109	5.25	0.00207619
NMZ US	0.115	20.5	0.005609756
NNC US	0.0048	5.6	0.000857143
NNP US	0.0061	6	0.001016667
NNY US	2.22	11	0.201818182
NOM US	0.0026	2	0.0013
NPG US	0.0644	3.35	0.019223881
NPI US	0.437	45	0.009711111
NPN US	0.0642	1.1	0.058363636
NPP US	0.491	50	0.00982
NPT US	0.176	17.5	0.010057143
NPV US	0.0035	5.2	0.000673077
NPY US	0.0076	6.3	0.001206349
NQJ US	0.0258	10.25	0.002517073

NQM US	0.136	30	0.004533333
NQP US	0.0017	7.5	0.000226667
NQS US	0.116	32.25	0.003596899
NQU US	0.0505	50	0.00101
NRK US	0.0283	3.25	0.008707692
NRO US	0.487	29	0.016793103
NTC US	0.0444	4.6	0.009652174
NTG US	0.95	42.4	0.02240566
NTX US	0.0056	6.25	0.000896
NUJ US	0.0167	4	0.004175
NUM US	0.0064	10	0.00064
NUO US	0.0162	4	0.00405
NUV US	16.238	150	0.108253333
NUW US	0.113	11.5	0.009826087
NVG US	0.255	7	0.036428571
NVJ US	0.0142	2	0.0071
NVY US	0.015	3.325	0.004511278
NWI US	0.0125	4.8	0.002604167
NXE US	0.0147	2.825	0.00520354
NXR US	0.0545	6.5	0.008384615
NYV US	0.316	2.34	0.135042735
NZX US	0.0013	4.2	0.000309524
PCF US	1.94	12.5	0.1552
PCK US	0.877	26	0.033730769
PCN US	1.722	31.75	0.05423622
PDT US	0.8	13	0.061538462
PFL US	0.31	16.25	0.019076923
PGP US	0.116	9.3	0.012473118
PHD US	0.183	22.55	0.008115299
PHF US	317	1.8	176.1111111
PHK US	0.373	105	0.003552381
PMO US	0.0294	15	0.00196
PMX US	0.315	28.85	0.010918544
PSW US	0.13	9.6	0.013541667
PSY US	0.328	36	0.009111111
PTY US	0.681	55.5	0.01227027
PYN US	0.00221	5	0.000442
PZC US	0.859	19.5	0.044051282
RAP US	0.090801	1.75	0.051886286
RCS US	0.235	32.2	0.007298137
RFA US	0.025	1	0.025
RIF US	0.162	6.667	0.024298785
RIT US	0.126	9.65	0.013056995

RMT US	0.469	8.5	0.055176471
RNY US	0.0315	1.3	0.024230769
RVT US	0.932	10	0.0932
SCD US	0.379	29.7	0.012760943
SLA US	0.029	13.5	0.002148148
SMF US	0.202	5.6	0.036071429
SPE US	0.007	14	0.0005
SRV US	1.146	8.75	0.130971429
STK US	0.169	13.1	0.012900763
TEI US	0.704	41	0.017170732
TPZ US	0.41	6.85	0.059854015
TSI US	1.424	20	0.0712
TYN US	0.37	4.6	0.080434783
TYY US	0.377	14	0.026928571
UTG US	0.206	20	0.0103
VBF US	0.0047	5	0.00094
VFL US	0.0032	2.1	0.00152381
VKL US	0.103	4.4	0.023409091
VMM US	0.008	6.3	0.001269841
WEA US	0.312	10	0.0312