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MONEY MARKET FUNDS VS. ULTRA-SHORT BOND FUNDS

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Abstract

This thesis explores the investment vehicles known as Money Market Funds and Ultra-Short Bond Funds. Both types of funds are commonly used to invest short term cash savings as an alternative to a conventional bank savings account or certificate of deposit. Since both funds are marketed towards prospective investors to fulfill the same need, understanding the differences between the two will help individuals make better investment decisions. The key components of the two types of funds being explored will be their respective risk and return profiles, both historically and in the contemporary economic climate.

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Introduction

I invite you to go to ridgeworth.com, the website of RidgeWorth Investments. Under the "Funds" tab, select "Money Market". There you will find a list of Money Market Funds operated by RidgeWorth, yet included in that list are two other funds. These funds are not Money Market Funds. These two other funds are Ultra-Short Bond Funds. They are not under the same heavy regulations by the Securities and Exchange Commission. Yet for some reason, they are listed right there alongside Money Market Funds.

For years, investment companies have been marketing Ultra-Short Bond Funds as an alternative to Money Market Funds. They claim that they are safe investments, with some companies comparing their risk not even to other investment funds, but to cash. Further, their prospectuses proclaim their goal of outperforming Money Market Funds, while still providing the same goal of capital preservation and liquidity.

Ultra-Short Bond Funds are not Money Market Funds. They differ in structure, operations and in risk and returns. That investment companies market Ultra-Short Bond Funds as near-equivalents to Money Market Funds is at best wishful thinking.

Money Market Funds

Money Market Funds are Mutual Funds designed for the low risk investment of cash reserves. These funds focus on preserving capital and liquidity while providing higher returns than a traditional savings account with a bank. To achieve this, Money Market Funds invest debt-securities, primarily U.S. government backed securities, repurchase agreements, commercial debt and other asset-backed securities. The low risk and high liquidity associated with Money Market Funds makes them an ideal place for investing short-term cash reserves, and investments into Money Market funds have grown to over $3.5 trillion.

Return Profile

Net Asset Value

Net Asset Value per share is the total value of the fund's holdings divided by the number of shares in the funds. Unlike other types of Mutual Funds, Money Market Funds are operated to maintain a constant Net Asset Value of $1 per share. Money Market Funds calculate their Net Asset Value per share daily based upon the closing price of all of the investments in their portfolio. Returns on investments in Money Market Funds are realized as dividends paid on these shares, not through an increase in share price. These dividends, however, are paid out to investors in the form of additional shares in the Money Market Fund. The effect of this is that per share Net Asset Value remains almost constant. At the same time, the number of shares of a Money Market Fund fluctuates based upon returns.

From the investor's perspective, return on investment in a Money Market Fund comes not as cash dividends or increased share price, but as an increased number of shares, each valued at $1. The investor can realize this return by redeeming their shares from the Money Market Funds for the $1 Net Asset Value of each share.

Historical Returns

While various types of Money Market Funds offer different rates of return, the Lipper averages[1] are shown in the Table 1.

Table 1

	2008	’06-‘08	’04-‘08	’99-‘08
Average Yearly Yield	0.47%	2.60%	2.69%	2.55%

The drastic reduction in yearly return realized in the last year (2008) is due largely to the many economic catastrophes that occurred that year, namely the financial collapse of many large financial institutions, for example: Lehman Brothers and Merrill Lynch. Many Money Market Funds held debt-securities issued by these companies and suffered substantial losses when the companies defaulted.

Types of Money Market Funds

Institutional Money Market Funds

Institutional Money Market Funds are Money Market Funds with large minimum-deposit requirements, ranging anywhere from $500,000 to $100 million dollars. These funds are utilized by corporations and municipal governments, as well as large non-profit companies and universities.

Retail Money Market Funds

In the early 1970s, the first American Retail Money Market Fund, The Reserve Fund, was created to allow smaller investors access to the same benefits of Institutional Money Market Funds. Retail Money Market Funds are Money Market Funds targeted as individuals and small companies. While

[1] Lipper is private research firm. The Lipper averages are wildly used in fund prospectuses as a benchmark against which to judge the fund’s historical performance.

some Retail Money Market Funds still have sizeable minimum deposits (the Vanguard Admiral Treasury Money Market Fund has a minimum deposit of $50,000) many Retail Money Market Funds require the purchase of only a single share, a $1 minimum.

Tax-Exempt Money Market Funds

Since Money Market Funds invest heavily in government-issued debt-securities, they can be structured to avoid state and/or federal taxes. While taxable Money Market Funds generally offer better returns, depending on the investor's income a Table 2 below shows the average yearly returns for the 9 Money Market Funds offered by Vanguard and illustrates the differences in returns between taxable and tax-exempt Money Market funds.

Table 2

Taxable			
	Average Annual Return		
Fund	1 yr (Jan 09 – Oct 09)	5 yr	10 yr
Admiral Treasury Money Market	0.44%	3.00%	2.95%
Federal Money Market	0.74%	3.20%	3.05%
Prime Money Market	0.94%	3.31%	3.12%
Average	0.71%	3.17%	3.04%
Tax-Exempt			
	Average Annual Return		
Fund	1 yr (Jan 09 – Oct 09)	5 yr	10 yr
California Tax-Exempt MM	0.44%	2.32%	2.10%
New Jersey Tax-Exempt MM	0.53%	2.16%	2.37%
New York Tax-Exempt MM	0.45%	2.37%	2.18%
Ohio Tax-Exempt MM	0.66%	2.44%	2.27%
Pennsylvania Tax-Exempt MM	0.60%	2.43%	2.24%
Tax-Exempt Money Market	0.60%	2.45%	2.27%
Average	0.55%	2.36%	2.24%

(Source: Vanguard.com)

The table clearly shows that there is a consistent advantage in terms of total pre-tax returns to taxable Money Market Funds. Vanguard's main Money Market Fund, the Prime Money Market Fund, has consistently averaged almost a full 1% higher return than most of the tax-exempt funds, and has always outperformed them each individually. Ultimately, the ideal Money Market Fund for a given investor depends on that investor's particular tax situation.

Regulations

As Mutual Funds, Money Market Funds are regulated by the Securities and Exchange Commission, primarily under the Investment Company Act of 1940. However, as Money Market Funds are intended to be ultra-low risk investments, they are more heavily regulated than standard Mutual Funds. The extra requirements for Money Market Funds are enumerated in Rule 2a-7 of the Investment Company Act[2].

Holdings

Rule 2a-7 specifies two types of investments for Money Market Funds, First Tier Securities and Second Tier Securities. First Tier Securities include government issued securities (United States federal, state and local); debt-securities with the highest short-term rating from an approved ratings agency and securities issued by other registered Money Market Funds. Second Tier Securities are any securities which do not meet the requirements of First Tier Securities. Money Market Funds are required to have no more than 5% of their total assets invested in second tier securities.

[2] These descriptions are summaries of the major guidelines governing Money Market Funds. Each rule discussed has exceptions and variances. See Investment Company Act of 1940 and Rule 2a-7 for the full list of regulations.

Duration

Additionally, there are regulations on the maturities of the securities that Money Market Funds can hold. No single security can have a maturity great than 397 days (13 months in a leap year) and the dollar-weighted average maturity of all of a Fund's holdings cannot be greater than 90 days.

Diversification

To further limit exposure to credit risk, Money Market Funds are required to keep a well-diversified portfolio. While the rules for this diversification are complicated and often specific to individual funds, generally Money Market Funds cannot invest more than 5% of its assets with a single security issuer, and not more than 1% if the security issue is determined to be Second Tier. There are two major exceptions to the rules regarding diversification. A Money Market Fund can invest more than 5% of its assets into another Money Market Fund. More importantly, a Money Market Fund can invest an unlimited percentage of its assets into government securities. Many Money Market Funds invest only in government-issued securities to gain tax-exemptions.

Risk of Loss

While Money Market Funds are obligated by law to have very low risk, it is possible for an investor to lose money.

The main risk faced by Money Market Funds is interest rate risk. The value of the fixed-income securities held by the Funds is inversely related to interest rates, so a spike in interest rates could reduce the Fund's Net Asset Value to less than the $1 per share benchmark. However since Money Market Funds always have an average duration of less than 3 months, this risk is miniscule.

Different Money Market Funds also invest in non-government issued securities to varying degrees. These securities face interest rate risk as well as credit default risk. Since Money Market Funds are designed to be safe investments, they generally only invest in securities with high credit ratings to avoid this risk. Further, many Money Market Funds invest only in securities issued or backed by the federal government, and thus face no credit risk.

While these risks could create a situation in which investors in Money Market Funds lose principal, it is extremely rare for a Money Market Fund to fall below the $1 per share Net Asset Value, known as “breaking the buck”.

Breaking the Buck

In light of the recent economy, it would be careless to give the impression that investments in Money Market Funds are a sure thing. Money Market Funds, unlike bank accounts, are not insured by the FDIC. On September 16, 2008 the Reserve Primary Fund’s Net Asset Value dropped below $1 per share. This was the first time that a Retail Money Market Fund had “broke the buck” or lost principal.

While the losses incurred by investors in the Reserve Primary Fund cannot be ignored when evaluating the risk of Money Market Funds, the resulting actions taken by the federal government and other investment companies seem to indicate that there is essentially no chance of losing money in a Money Market Fund.

Further insuring the stability of Money Market Funds were the actions taken by the U.S. Treasury department. The SEC explicitly states “unlike a “money market deposit account” at a bank, money market funds are not federally insured.” Yet as the financial industry feared a rush of investors withdrawing their money, the Treasury Department stepped in with a temporary guarantee program. Money Market Funds could buy into this program, which insured its shareholders a Net Asset Value of $0.9975. While the program was in effect, the worst-case scenario for an investor in a participating Money Market Fund was a loss of 0.25%. The treasury department reported that it suffered no losses under the program and actually earned over $1 billion. Since the $1 billion in participation fees came from Money Market Funds, the argument could be made that the effect of the program actually lowered the returns of the Money Market Funds which participated.

At the same time that the Reserve Primary Fund broke the buck, other Money Market Funds did as well, although it had no effect on their investors. Instead, the investment companies backing these Funds (Legg Mason, Morgan Stanley, Charles Schwab, Wachovia, Bank of America… the list goes on) infused the Funds with their own capital to maintain a $1 per share Net Asset Value. Many Money Market Fund Managers also waived all or some of their fees to boost Net Asset Value (iMoney 2009).

Ultra-Short Bond Funds

Ultra-Short Bond Funds are Mutual Funds that invest primarily in debt-securities. The name "Ultra-Short" comes from the fund's short term dollar-weighted average duration[3], which is generally maintained between 3 months and a year. Ultra-Short Bond Funds vary widely in terms of their dollar weighted average maturity. Of the 36 funds used to analyze the dollar-weighted maturity of Ultra-Short Bond Funds, their dollar-weighted average maturities ranged from 26 days to 27 years, with an average of 3.76 years[4] (at the end of 2008; *Source: CRSP*). Ultra-Short Bond Funds are Mutual Funds which are similar to Money Market Funds in many ways. They are both low-risk investments that aim to preserve principal and liquidity. The primary difference is that Ultra-Short Bond Funds engage in more risky investments in an attempt to outperform Money Market Funds. Ultra-Short Bond Funds still invest primarily in fixed-income debt securities, but without the heavy regulations that hold back Money Market Funds, Ultra-Short Bond Funds are free to invest in riskier commercial debt, longer maturity bonds, and other riskier assets.

Most Ultra-Short Bond Funds operate almost identically to Money Market Funds with the majority of their assets. Take for example the RidgeWorth U.S. Government Securities Ultra-Short Bond Fund, which invests 80% of its assets into short-term investment grade securities, including Money Market Funds (RidgeWorth 2008). Where Ultra-Short Bond Funds differ from Money Market Fund is as to what qualifies as investment grade. Ultra-Short Bond Funds are not bound by Rule 2a-7, and do not have the strict requirement to invest in First Tier Securities.

Ultra-Short Bond Funds invest in debt-securities issued by foreign corporations, mortgage-backed securities and financial derivatives. By investing a larger portion of their assets in these riskier

[3] Ultra-Short Bond Funds use dollar-weighted average duration as a measure of their sensitivity to change in interest rates. While having a similar effect, this is not the same measure used to control interest rate sensitivity used by Money Market Funds, dollar-weighted average maturity. See Appendix A

[4] See Appendix B for list of Ultra-Short Bond Funds

than securities than Money Market Funds, Ultra-Short Bonds funds attempt to achieve higher returns, while still minimizing risk.

Return Structure

Like Money Market Funds, gains are distributed to the investor via periodic dividend payments. Unlike Money Market Funds, Ultra-Short Bond Funds do not always maintain a consistent Net Asset Value. While Ultra-Short Bond Funds are operated with the goal of maintaining a consistent per share Net Asset Value, losses do occur and are reflected in a lowered share value. Due to this, an investor who enters the fund when the share value is low could experience a capital gain by means of an increasing share value and not solely through dividend payouts.

Risk of Loss

Like Money Market Funds, Ultra-Short Bond Funds attempt to minimize exposure to interest rate risk by minimizing their portfolio duration. Ultra-Short Bond Funds generally[5] keep their portfolio duration between 3 months and 1 year, whereas Money Market Accounts must keep their portfolio duration below 3 months. While this does mean that Ultra-Short Bond Funds have more exposure to interest rate risk than Money Market Funds, it is still minimized relative to the aggregate bond fund market.

Relative to Money Market Funds, Ultra-Short Bond Funds face a significant credit risk. Whereas Money Market Funds are required by law to invest in only high-grade commercial paper, Ultra-Short Bond Funds invest in much riskier debt-securities in an attempt to gain higher returns.

[5] While these are the general guidelines listed in Ultra-Short Bond Fund Prospectuses, greater or smaller durations are allowed at the discretion of the fund manager for short periods of time. The ability to deviate from the 3 month to 1 year duration standard is specific to each fund.

Many Ultra-Short Bond Funds are invested heavily in mortgage-backed securities, including sub-prime mortgage securities. These securities face many unique risks. First, there is a high credit default risk, though some of the mortgage-backed securities invested in by Ultra-Short Bond Funds are insured against default, eliminating this risk. Even with insured mortgage-backed securities, however, there is pre-payment risk. When interest rates fall, borrowers are likely to refinance mortgages, essentially executing the call option on their original mortgage. This eliminates the future cash flows expected in the mortgage-backed security and creates a risk of lower than expected returns.

Ultra-Short Bond Funds also take complicated positions in financial derivatives and credit swaps. These positions expose the funds to several risks, mainly an increased credit risk as the creditworthiness of the counterparty is more difficult to evaluate than a simpler fixed-income security (RidgeWorth 2009).

Perhaps the SEC states it best when it says "be skeptical of any investment that promises you a greater potential for return at no additional risk (SEC 2009)." While Ultra-Short Bond Funds may be marketed towards investors as higher-yielding alternatives to Money Market Funds, the risks they face are far greater. Ultra-Short Bond Funds can and do lose money. The investment companies that back them will not step in inflate their values, and the U.S. Treasury Department has no intention of guaranteeing their value. Of the 109 Ultra-Short Bond Funds used by MorningStar to track the market segment, 37 have a negative average yearly return over the last 3 years[6].

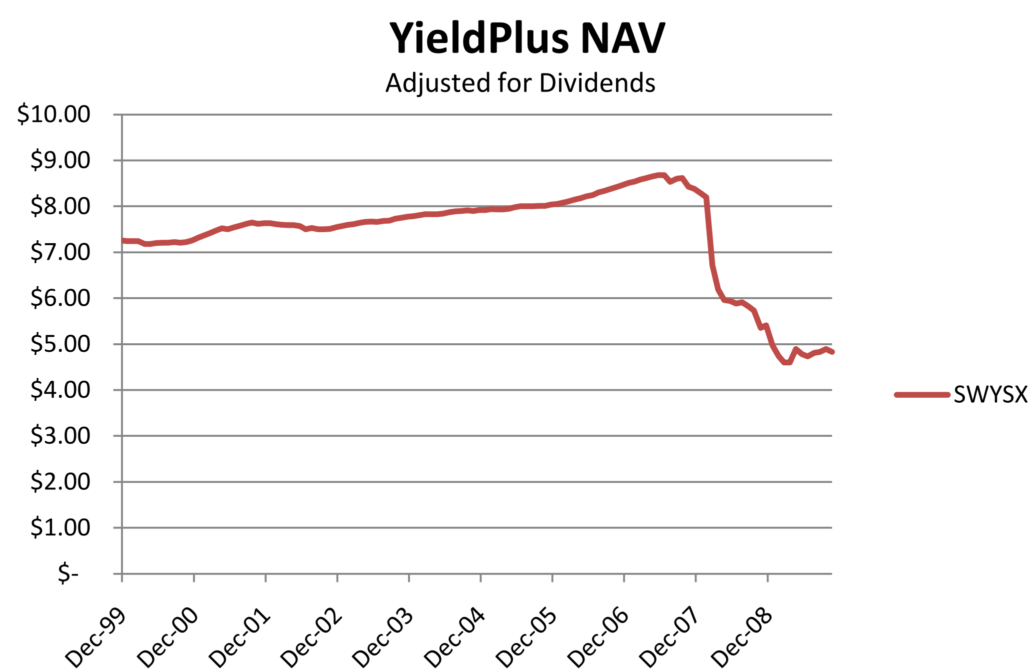
[6] See Appendix C for list of Ultra-Short Bond Funds used by MorningStar

Schwab YieldPlus

The fund which has drawn the most attention in recent years to Ultra-Short Bond Funds is the YieldPlus Fund, owned by Charles Schwab. YieldPlus was marketed to investors as a smart investment with a risk only "marginally higher than cash" (Deng, McCann, O'Neal, & Prendergast, 2009). The marketing and prospectus for the fund compared it to a Money Market Fund with the advantage of being able to engage in the "use [of] many investments just outside the approved limits of money market funds" (Deng, McCann, O'Neal, & Prendergast, 2009).

For several years, Schwab's statements appeared to be true. Between 1999 and 2007, the Schwab YieldPlus Fund consistently outperformed not only the average Money Market Fund, but also the average returns of other Ultra-Short Bond Funds. The fund showed steady growth, consistent with its objective of preserving capital. However, at the end of 2007, returns began to drop. Figure 1 shows the per share net asset value of the YieldPlus Fund for the last decade.

Figure 1



(Source: finance.yahoo.co)

The dismal returns of the YieldPlus Fund began in 2007. In July of 2007, the fund's adjusted Net Asset Value peaked at $8.68. By March of 2009, that number had dropped to $4.60, a loss of 47% in less than two years. At the time of its decline, YieldPlus was invested heavily in mortgage-backed securities. This heavy investment in mortgage-backed securities posed three problems for the fund all of which compounded one another. First, it exposed the fund to a large credit risk, since many of the mortgage-backed securities were subprime. Second, the fund extended its dollar-weighted average duration beyond the 1 year threshold. Finally, the fund overinvested into these securities, and lacked diversification. When subprime mortgages began defaulting and the value of the mortgage-backed securities began to fall, investors began to pull their money out of the fund. This forced the fund to sell its longer-duration securities at a loss, further driving down the share-price (Deng, McCann, O'Neal, & Prendergast, 2009).

Because of its misleading marketing and questionable investment practices, YieldPlus has come under legal pressure. Shareholders have claimed that Schwab misrepresented the risks associated with the fund and broke the diversifications standards set forth in its prospectus (Labins et al v Charles Schwab et al, 2008). A class action suit has been filed in California but as of yet the case has not been decided (SCACH 2009). The SEC has also sent a Wells Notice, indicating its intentions to investigate Schwab for violating SEC regulations in their handling of the YieldPlus Fund.

Considering the legal action taken against Charles Schwab for the YieldPlus Fund, the question arises of whether the failure of YieldPlus fund is just an example of one bad apple, or indicative of the risks associated with Ultra-Short Bond Funds as a whole. It is easy to point to YieldPlus, a negative outlier in the spectrum of Ultra-Short Bond Funds. But it is just as easy to find a positive outlier. Take for example the Allegiant Ultra Short Bond I. The Allegiant Ultra Short Bond I Fund is rated as having an average risk profile relative to other Ultra-Short Bond Funds, and actually has 25% of its assets invested into mortgage-backed securities (MorningStar 2009).

Figure 2

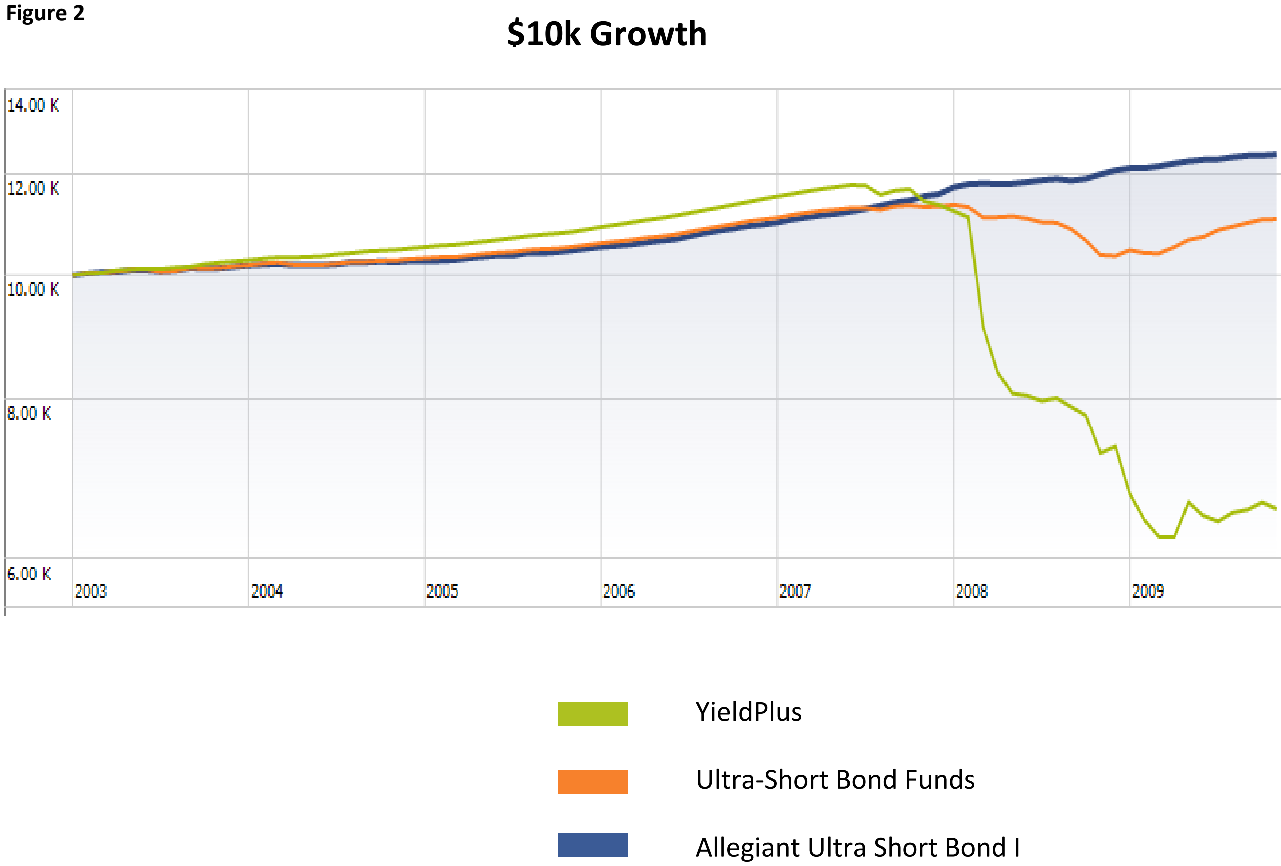


Figure 2 shows the growth of a $10 thousand dollar investment in the various funds. The *Ultra-Short Bond Funds* line is the category average for MorningStar Ultra-Short Bond Funds[7]. The graph illustrates many things about the recent performance of Ultra-Short Bond Funds. It shows how the collapse of major investment firms and the subprime mortgage crisis affected Ultra-Short Bond Funds as they did the rest of the economy. While YieldPlus may have suffered the greatest (between mid-2007 and mid-2008 the fund had

[7] See Appendix C

losses of over 31%), the Ultra-Short Bond Fund market as a whole felt the effects of an unstable economy.

Figure 2 also shows a bright side of Ultra-Short Bond Funds. While many funds lost money on investments into high risk securities, some funds with more diversified holdings and safer investments met their goal of capital preservation with a moderate return. In fact, the returns of 2009 seem to indicate that things are returning to normal, with both funds, as well as the category average, returning to the slow but steady increase.

Money Market Funds vs. Ultra-Short Bond Funds

Research Methods

To make direct comparisons between Money Market Funds and Ultra-Short Bond Funds, a sample of funds from each category was analyzed between January of 2000 and May of 2009. The sample for Ultra-Short Bond Funds contained 46 funds[8], while the sample for Money Market Funds contained 20 funds[9]. The data to analyze the Funds comes from the Center for Research in Securities Prices (CRSP). Since both types of funds are meant to be high-liquidity short-term investments, monthly returns were used for analysis as yearly returns imply a longer than intended investment horizon.

A quota sampling method was used to develop each sample. While Money Market Funds must define themselves as such, categorizing a fund as an Ultra-Short Bond Fund is more difficult since they do not all self-identify. Funds that either self-identified as Ultra-Short Bond Funds or were categorized as such by MorningStar were considered Ultra-Short Bond Funds. The following criteria were used to select funds for each category:

- Whenever possible, Money Market Funds and Ultra-Short Bond Funds were selected from the same fund families.
- To illustrate the affect of the choice between Ultra-Short Bond Funds and Money Market Funds to the individual investor, institutional funds (funds requiring a minimum deposit of $100,000 or more) were excluded from each category.
- Money Market Funds designed for state-specific tax exemption were excluded in order to make a better direct comparison to taxable Ultra-Short Bond Funds.

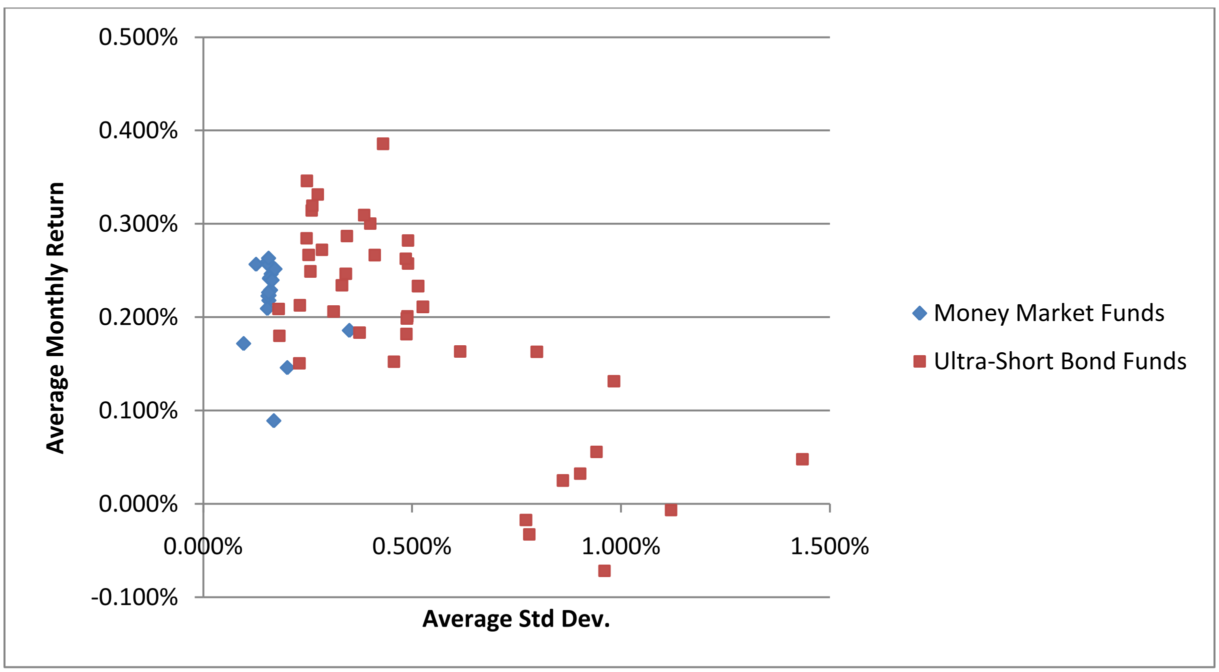
[8] See Appendix D for the complete sample of Ultra-Short Bond Funds
[9] See Appendix E for the complete sample of Money Market Funds

- Funds with more assets were chosen over smaller funds to more accurately represent the sector as a whole.

Variance

Looking at the returns of the two categories, one fact is strikingly obvious. In terms of average returns and standard deviations, Money Market Funds are much more uniform as a class than Ultra-Short Bond Funds. Figure 3 is a scatter chart of average monthly returns and standard deviations for Money Market Funds and Ultra-Short Bond Funds between 2000 and 2009.

Figure 3



Note: Several Ultra-Short Bond Funds were excluded from Figure 3 for ease of viewing. These funds all had average returns and standard deviations beyond (less than for average returns and greater than for standard deviation) the displayed ranges.[10]

[10] See Appendix F for the complete graph.

Figure 3 shows a much closer grouping for Money Market Funds than for Ultra-Short Bond Funds. This is the result of the stricter regulations on Money Market Funds than on Ultra-Short Bond Funds. That is to say that since more investment options are available to Ultra-Short Bond Funds, different funds utilize vastly different investment strategies, leading to vastly different outcomes.

What this means to the individual investor is that selecting individual Ultra-Short Bond Funds to invest in is much more difficult than selecting a Money Market Fund, which is likelier to a have more similar performance to other Money Market Funds. Table 3 below shows the average return and standard deviation of monthly returns between 2000 and 2009.

Table 3

Average Standard Deviation Relative to Average Monthly Returns		
	Average Monthly Return	Std Dev.
Ultra-Short Bond Funds	0.167%	0.81%
Money Market Funds	0.22%	0.18%

(*Source: CRSP)*

Table 3 further emphasizes the point that there is a much higher variance in the returns of Ultra-Short Bond Funds than for Money Market Funds.

Risk

As would be expected, Ultra-Short Bond Funds had a significantly higher risk of loss than Money Market Funds. Table 4 shows the number of positive and negative monthly returns between 2000 and 2008.

Table 4

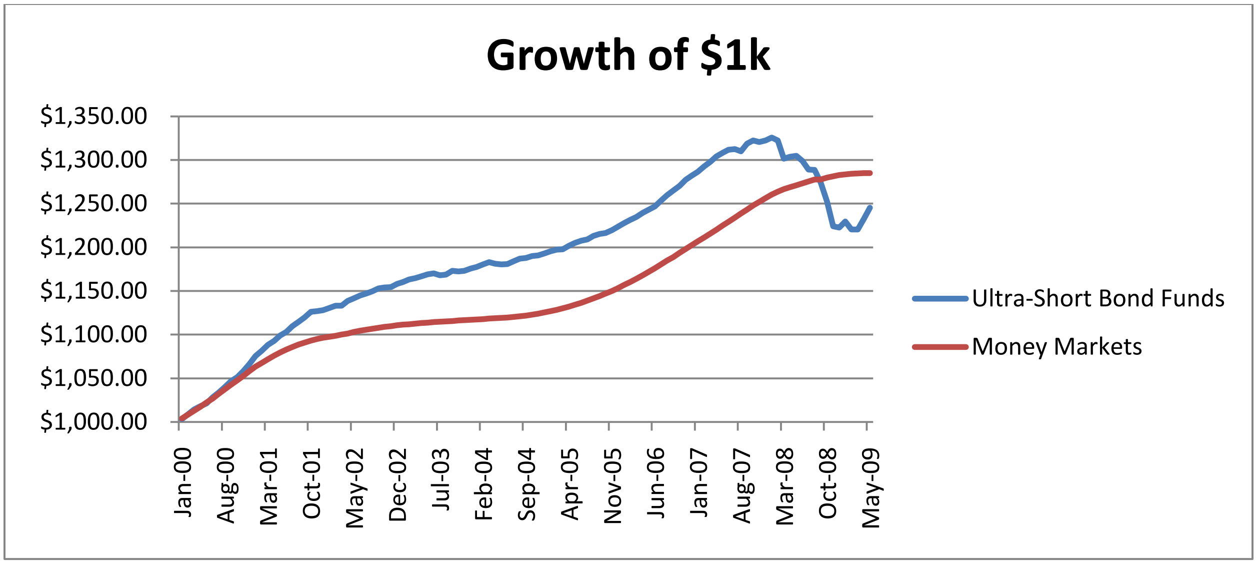
Monthly Returns	Positive	Negative	Total
Ultra-Short Bond Funds	3466	705	4171
Money Market Funds	2167	1	2168
Total	5633.00	706.00	6339.00
			p < .001

(*Source: CRSP)*

The statistical significance is not surprising, as the practical differences between the two types of funds are obvious. While companies may market Ultra-Short Bond Funds as alternatives to Money Market Funds, Ultra-Short Bond Funds clearly run a much higher risk of losing money than Money Market Funds. It also bears mentioning that the one negative return observed for Money Market Funds is the *only* negative return for a Retail Money Market Fund in the industry's history. This was the September 2008 return for the Reserve Primary Fund, when the Net Asset Value fell to 97 cents.

Returns

The alleged advantage of Ultra-Short Bond Funds is that they offer higher returns than Money Market Funds. As was already shown in Table 4, the average monthly returns between 2000 and 2009 were actually higher for Money Market Funds than they were for Ultra-Short Bond Funds. The average yearly returns for each fund type are shown in Appendix G and Appendix H. Figure 4 shows the how a $1,000 investment would grow based on the average returns for Money Market Funds and Ultra-Short Bond Funds.

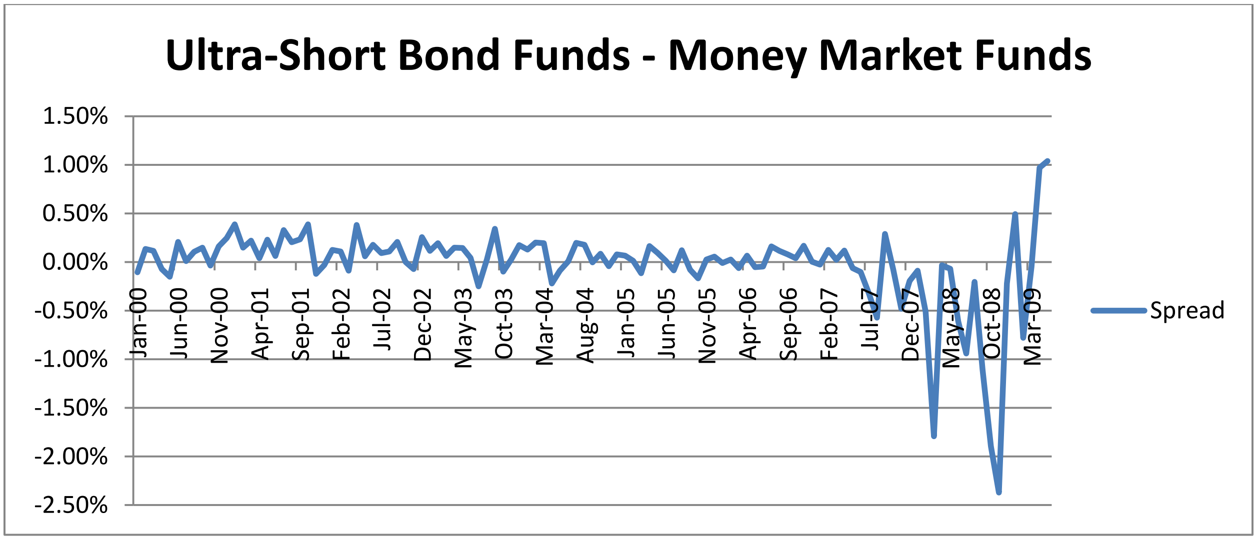


(Source: CRSP)

Figure 4

The graph clearly shows that for 7 years, Ultra-Short Bond Funds' returns were as good as or better than Money Market Funds. It was not until late 2007 that disaster struck. Much as was the case with the Schwab YieldPlus Fund, Ultra-Short Bond Funds as a whole suffered greatly during the economic crisis of the latter part of this decade. While the subprime mortgages were the driving force behind the losses suffered in 2008, they were also the driving force behind higher returns in the years leading up to 2008. This begs the question of whether it was really a rare circumstance that led to the decline of Ultra-Short Bond Funds or if it is just a flawed product. Figure 5 below shows the difference between the average monthly returns of Ultra-Short Bond Funds and Money Market Funds.

Figure 5



(Source: CRSP)

What this shows is that even under less extreme circumstances than in 2008, Money Market Funds often outperform Ultra-Short Bond Funds. In first 7 years of the decade, even when Ultra-Short Bond Funds did outperform Money Market Funds, it was always by less than .5% a month. The best year for Ultra-Short Bond Funds relative to Money Market Funds was between November of 2000 and October of 2002. During this period, Ultra-Short Bond Funds outperformed Money Market Funds by a grand total of just over 2%.

Conclusion

Both Money Market Funds and Ultra-Short Bond Funds offer low risk of loss. They also both strive for a return on investment greater than that of a conventional bank savings account. For this reason they are both marketed towards investors as places to invest short-term cash reserves. The key difference between a Money Market Fund and an Ultra-Short Bond Fund is regulation. Money Market Funds are regulated so heavily that the risk of a retail investor losing money is practically non-existent. Ultra-Short Bond Funds, on the other hand, are much less heavily regulated. This less restrictive environment allows Ultra-Short Bond Funds to pursue higher rates of returns than would otherwise be possible.

The decision faced by investors is whether or not to risk loss of principal in order to try to make a greater return. Before this decision can be made, another question needs to be answered. Do Ultra-Short Bond Funds, with their substantially higher risks, actually offer a higher rate of return? Between 2000 and 2007, this would have been true, whereas in 2008 it would be quite the opposite. Perhaps the most redeeming piece of evidence for Ultra-Short Bond Funds is that they highly outperformed Money Market Funds early in 2009. This seems to imply that as the U.S. economy begins to heal, Ultra-Short Bond Funds may once again be a good alternative to Money Market Funds.

Yet the losses suffered by Ultra-Short Bond Funds cannot be ignored. As a product marketed towards investors as an ultra-safe investment, Ultra-Short Bond Funds have failed. In reality, Ultra-Short Bond Funds carry significant risks. Money Market Funds can safely be viewed by the investor as a higher-yielding bank account. Even when Wall Street has a bad day, their money will still be there. The same cannot be said for Ultra-Short Bond Funds.

Appendix A

Maturity vs. Duration

Maturity – Maturity is the time until the expiration of a fixed income investment.

Duration- Duration is a measure of how long it will take payments from a fixed-income security to repay the price paid for the security. Duration is a measure of a fixed-income security's sensitivity to changes in interest rates. As duration increases, a change in interest rates produces a larger change in the value of the fixed-income security.

Since fixed-income securities by definition do not make payments beyond their maturity, duration is always less than or equal to maturity. Money Market Funds focus on bonds of short maturities, while Ultra-Short Bond Funds focus on their portfolio duration. The effect of this is that a change in interest rates affects an Ultra-Short Bond Fund more than it affects a Money Market Fund. The funds used to calculate the average maturity of an Ultra-Short Bond Fund are listed in Appendix B.

Example: Consider a fixed income security that cost $100 and a 6% annual yield, with monthly payments. If this security matures in 14 months, it would not be considered as a tier one security for to Money Market Fund. However the duration of this security would be .815 years, which would make it eligible for an Ultra-Short Bond Fund that requires investments with durations under 1 year.

Appendix B

Ultra-Short Bond Funds Used to Compare Maturity and Duration

Ticker	Maturity
CULAX	0.07
FUSFX	0.3
SWYSX	0.5
PFTCX	0.64
PSHAX	0.64
PRTBX	0.66
SIGVX	0.73
DFIHX	0.93
SISSX	0.97
FUBAX	1
FULAX	1
ASDAX	1.1

Ticker	Maturity
ASDIX	1.1
CMGUX	1.17
NVSAX	1.21
TGSMX	1.4
PYLMX	1.5
KNLCX	1.8
MWUIX	1.91
SADAX	1.93
WUSDX	1.93
SAMLX	1.95
PULAX	2.69
PUSSX	2.69

Ticker	Maturity
BRIVX	2.9
ASARX	3
TSDOX	3
JUSUX	3.25
OGUCX	3.25
ONUAX	3.25
ESAAX	4.4
PFIAX	4.52
EASBX	5.57
MGSDX	18.42
FCSCX	27
FISAX	27

These 36 Ultra-Short Bond Funds were taken from the funds listed in Appendix D. The remaining funds did not publish a dollar-weighted average maturity through CRSP in 2008.

Appendix C

List of funds in MorningStar Ultra-Short Bond Fund Category

PIMCO Floating Income Instl
PIMCO Floating Income P
PIMCO Floating Income Admin
PIMCO Floating Income D
PIMCO Floating Income A Load Waived
PIMCO Floating Income A
PIMCO Floating Income C
AIM LIBOR Alpha Y
AIM LIBOR Alpha I
AIM LIBOR Alpha A Load Waived
AIM LIBOR Alpha A
AIM LIBOR Alpha R
AIM LIBOR Alpha C
JPMorgan Limited Duration Bd Ultra
Legg Mason WA Adj Rate Income I
JPMorgan Limited Duration Bd Sel
JPMorgan Limited Duration Bd A LW
JPMorgan Limited Duration Bd A
Legg Mason WA Adj Rate Income A LW
Legg Mason WA Adj Rate Income A
JPMorgan Limited Duration Bond
GMO Short-Duration Investment III
Legg Mason WA Adj Rate Income C
JPMorgan Limited Duration Bd C
Legg Mason WA Adj Rate Income B
Metropolitan West Ultra Short Bond I
Metropolitan West Ultra Short Bond M
Fifth Third Short Term Bond Instl
Fifth Third Short Term Bond A LW
Fifth Third Short Term Bond A
Federated Ultrashort Bond Instl
PIMCO Short-Term Instl
PIMCO Short-Term P
PIMCO Short-Term Admin
PIMCO Short-Term D
PIMCO Short-Term A Load Waived
PIMCO Short-Term A
Federated Ultrashort Bond Instl Svc
Federated Ultrashort Bond A Load Waived
Federated Ultrashort Bond A
PIMCO Short-Term R
PIMCO Short-Term C
Fifth Third Short Term Bond C
Wells Fargo Advantage Ultra S/T Inc I
PIMCO Short-Term B
Wells Fargo Advantage Ultra S/T Inc Adm
Wells Fargo Advantage Ultra S/T Inc A LW
Wells Fargo Advantage Ultra S/T Inc A
RidgeWorth Ultra-Short Bond I
Wells Fargo Advantage Ultra S/T Inc Inv
BlackRock Enhanced Income BlackRock
BlackRock Enhanced Income Instl
Wells Fargo Advantage Stable Income Adm
Wells Fargo Advantage Ultra S/T Inc C
Wells Fargo Advantage Stable Income A LW
Wells Fargo Advantage Stable Income A
BlackRock Enhanced Income A Load Waived
BlackRock Enhanced Income A
BlackRock Enhanced Income Service
Calvert Ultra-Short Income A LW
Calvert Ultra-Short Income A
Wells Fargo Advantage Stable Income B
Wells Fargo Advantage Stable Income C
Evergreen Adjustable Rate Instl
Evergreen Adjustable Rate Instl Svc
Evergreen Adjustable Rate A Load Waived
Evergreen Adjustable Rate A
Managers Short Duration Government
Evergreen Adjustable Rate C
Evergreen Adjustable Rate B
RidgeWorth US Gov Sec Ultra-Short Bd I
Goldman Sachs Enhanced Income Instl
Payden Limited Maturity
Goldman Sachs Enhanced Income Admin
Goldman Sachs Enhanced Income A LW
Goldman Sachs Enhanced Income A
Federated Adjustable Rate Secs Instl
RidgeWorth Limited Duration I
Goldman Sachs Ultra-Short Dur Gov Ins
Franklin Adjustable US Govt Secs Adv
Federated Adjustable Rate Secs InSvc
CMG Ultra Short Term Bond
Goldman Sachs Ultra-Short Dur Gov IR
Franklin Adjustable US Govt Secs A LW
Franklin Adjustable US Govt Secs A
Goldman Sachs Ultra-Short Dur Gov A LW
Goldman Sachs Ultra-Short Dur Gov A
Goldman Sachs Enhanced Income B

Goldman Sachs Ultra-Short Dur Gov Svc
Franklin Adjustable US Govt Secs C
AMF Ultra Short Mortgage
TCW Short Term Bond I
Touchstone Ultra Short Dur Fixed Inc Z
Allegiant Ultra Short Bond I
Allegiant Ultra Short Bond A LW
Allegiant Ultra Short Bond A
Trust for Credit Unions Ultr-Sht Dur Gov
DFA One-Year Fixed-Income I
PIA Short Term Securities
Federated Gov Ultrashort Duration Instl
Federated Gov Ultrashort Duration InSvc
Federated Gov Ultrashort Duration A LW
Federated Gov Ultrashort Duration A
Fidelity Ultra-Short Bond
Fidelity Advisor Ultra Short Bond A LW
Fidelity Advisor Ultra Short Bond A
Fidelity Advisor Ultra Short Bond I
Fidelity Advisor Ultra Short Bond T
Principal Ultra Short Bond Inst
Principal Ultra Short Bond R4
Principal Ultra Short Bond R5
Principal Ultra Short Bond J
Principal Ultra Short Bond R3
Principal Ultra Short Bond R1
Permanent Portfolio Treasury Bill
Principal Ultra Short Bond R2Principal Ultra Short Bond A LW
Principal Ultra Short Bond A
SM&R Primary
Principal Ultra Short Bond C
AMF Ultra Short
Schwab YieldPlus
Northern Ultra-Short Fixed Income
Northern Tax-Advantaged U/S Fxd Inc

Appendix D

Ultra-Short Bond Funds

Used for direct comparison to Money Market Funds

Fund	Ticker
AMF Ultra Short Mortgage	ASARX
Allegiant Ultra Short Bond	ASDAX
Armada Ultra Short Bond Fund I	ASDIX
AMF Ultra Short	AULTX
BlackRock Enhanced Income	BRIVX
Citizens Ultra Short Bond Fund; Standard Shares	CFSBX
CMG Ultra Short Term Bond	CMGUX
Calvert Ultra-Short Floating Income	CULAX
DFA One-Year Fixed-Income	DFIHX
AIM LIBOR Alpha	EASBX
Evergreen Adjustable Rate	ESAAX
Franklin Adjustable U.S. Govt Secs	FCSCX
Federated Gov Ultrashort Duration	FGUAX
Franklin Adjustable US Govt Secs A	FISAX
Fidelity Advisor Ultra Short Bond	FUBAX
Federated Ultrashort Bond	FULAX
Fidelity Ultra-Short Bond	FUSFX
Goldman Sachs Enhanced Income	GEIAX
GMO Short-Duration Investment III	GMSIX
Goldman Sachs Ultra-Short Dur Gov	GSAMX
JPMorgan Limited Duration Bd Ultra	JUSUX
Fifth Third Short Term Bond	KNLCX
Managers Short Duration Government	MGSDX
Metropolitan West Ultra Short Bond	MWUIX
Wells Fargo Advantage Stable Income A	NVSAX
JPMorgan Ultra Short Duration Bond	OGUCX
JPMorgan Limited Duration Bd A	ONUAX
Capital Preservation Fund SC	PCPSX
Dryden Ultra Short Bond Fund A	PDUAX
PIMCO Floating Income A	PFIAX
PIMCO Short-Term	PFTCX
PIA Short Term Securities	PIASX
Permanent Portfolio Treasury Bill	PRTBX
PIMCO Short-Term A	PSHAX
Principal Ultra Short Bond	PULAX
Payden Limited Maturity	PYLMX
Wells Fargo Advantage Ultra S/T Inc A	SADAX
RidgeWorth Limited Duration	SAMLX

Fund	**Ticker**
RidgeWorth US Gov Sec Ultra-Short Bd	SIGVX
RidgeWorth Ultra-Short Bond	SISSX
SM&R Primary	SMRPX
Schwab YieldPlus	SWYSX
Trust For Credit Unions Ultr-Sht Dur Gov	TCUUX
TCW Short Term Bond	TGSMX
Touchstone Ultra Short Dur Fixed Inc	TSDOX
Wells Fargo Advantage Ultra S/T Inc	WUSDX

Appendix E

Money Market Funds

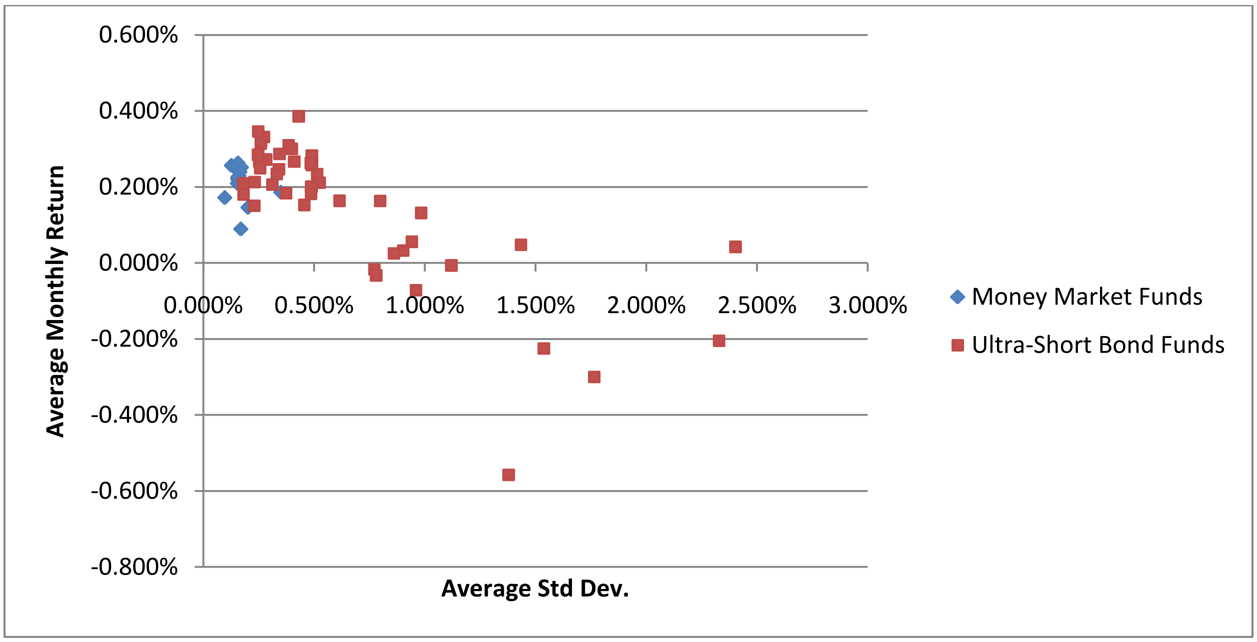
Used for direct comparison to Ultra-Short Bond Funds

Fund	**Ticker**
Fidelity Cash Reserves	FDRXX
Fidelity Municapl MMF	FTEXX
Vanguard Prime MMF	VMMXX
Schwab Cash Reserves	SWSXX
Schwab Value Adv MMF	SWVXX
Reserve Fund: Primary Fund	RFIXX
MFS Money Market Fund A	MCMXX
Edward Jones MMF	JNSXX
Wells Fargo MMF	WMMXX
RidgeWorth Prime Quality MMF	SQIXX
RidgeWorth US Gov MMF	SUIXX
PIMCO Funds: Money Market Fund	PYAXX
Asset Management Fund: Money Market Fund I	ASLXX
Calvert First Government Money Market Fund	FVRXX
Evergreen Money Market Fund A	EMAXX
Evergreen Money Market Fund I	EGMXX
Waddell & Reed Advisors Cash Management A	UNCXX
Payden Cash Reserves MMF	PBHXX
Western Asset MMF A	SBCXX
Western Asset MMF I	SCYXX

Appendix F

<u>Scatter Chart of Monthly Returns and Standard Deviations</u>

(Jan 2000 – May 2009)



Appendix G

Fund	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average Yearly Return between 2004 and 2008	Average Yearly Return between 2000 and 2008
ASLXX	6.107%	3.728%	1.422%	0.946%	1.188%	3.053%	5.413%	5.123%	1.797%	3.315%	3.197%
FVRXX	5.710%	3.450%	0.115%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	1.030%
EGMXX	6.109%	3.885%	1.481%	0.609%	0.856%	2.679%	5.014%	4.863%	2.571%	3.197%	3.119%
EMAXX	5.798%	3.579%	1.195%	0.358%	0.569%	2.376%	4.682%	4.556%	2.292%	2.895%	2.823%
FTEXX	3.811%	2.530%	1.180%	0.719%	0.857%	2.070%	3.401%	3.334%	1.916%	2.316%	2.202%
FDRXX	6.194%	4.090%	1.615%	0.896%	1.059%	2.930%	5.196%	5.061%	2.892%	3.427%	3.326%
JNSXX	N/A	0.000%	1.865%	0.104%	0.229%	1.994%	4.127%	4.391%	1.806%	2.509%	1.814%
SCYXX	6.295%	3.941%	1.396%	0.793%	0.933%	2.769%	5.440%	5.066%	2.851%	3.412%	3.276%
SBCXX	5.979%	3.781%	1.232%	0.686%	0.834%	2.620%	5.290%	4.927%	2.726%	3.279%	3.119%
PYAXX	5.945%	3.685%	1.240%	0.549%	0.758%	2.694%	4.981%	4.809%	2.069%	3.062%	2.970%
PBHXX	6.205%	4.082%	1.689%	0.960%	1.164%	2.975%	5.323%	5.043%	2.251%	3.351%	3.299%
RFIXX	5.545%	3.409%	0.931%	0.225%	0.384%	2.240%	4.485%	4.417%	-1.407%	2.024%	2.248%
SQIXX	5.858%	3.540%	1.260%	0.493%	0.661%	2.552%	4.863%	4.674%	2.159%	2.982%	2.895%
SUIXX	5.559%	3.524%	1.204%	0.400%	0.614%	2.406%	4.628%	4.433%	1.672%	2.751%	2.716%
SWVXX	5.890%	4.249%	1.580%	0.821%	0.938%	2.766%	5.138%	5.021%	2.738%	3.320%	3.238%
SWSXX	N/A	N/A	N/A	N/A	0.469%	2.645%	4.709%	4.589%	2.493%	2.981%	2.981%
VMMXX	6.289%	4.174%	1.653%	0.896%	1.108%	3.009%	5.339%	5.143%	2.772%	3.474%	3.376%
UNCXX	5.887%	3.673%	1.119%	0.436%	0.503%	2.339%	4.636%	4.640%	2.301%	2.884%	2.837%
WMMXX	5.803%	3.515%	1.163%	0.490%	0.683%	2.615%	4.916%	4.784%	2.355%	3.071%	2.925%
MCMXX	5.913%	3.697%	1.233%	0.603%	1.002%	2.907%	5.273%	5.079%	2.298%	3.312%	3.112%

Appendix H

Fund	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average Yearly Return between 2004 and 2008	Average Yearly Return between 2000 and 2008
EASBX	N/A	N/A	N/A	N/A	N/A	N/A	3.132%	1.231%	-10.409%	-2.015%	-2.015%
PIASX	7.934%	7.102%	2.985%	1.475%	1.316%	2.336%	4.448%	5.428%	4.159%	3.537%	4.131%
ASDIX	N/A	N/A	N/A	1.785%	1.011%	2.239%	4.419%	5.612%	4.375%	3.531%	3.240%
ASARX	7.126%	5.955%	3.224%	1.492%	1.676%	2.158%	4.575%	4.880%	-20.620%	-1.466%	1.163%
AULTX	N/A	0.214%	2.502%	1.719%	1.724%	2.450%	4.988%	4.596%	-32.568%	-3.762%	-1.797%
PDUAX	N/A	N/A	N/A	0.851%	1.096%	2.238%	4.409%	2.409%	N/A	2.538%	2.201%
ESAAX	3.665%	7.595%	4.214%	1.813%	1.761%	2.032%	4.452%	4.482%	-1.209%	2.304%	3.201%
FGUAX	N/A	N/A	N/A	0.561%	0.506%	2.647%	4.423%	4.859%	2.047%	2.896%	2.507%
FULAX	N/A	N/A	0.543%	0.971%	1.197%	2.237%	4.412%	2.857%	-4.440%	1.252%	1.111%
FUSFX	N/A	N/A	0.934%	1.868%	1.323%	2.964%	4.900%	-5.092%	-7.834%	-0.748%	-0.134%
FUBAX	N/A	N/A	1.336%	1.461%	1.041%	2.752%	4.733%	-5.380%	-8.171%	-1.005%	-0.318%
KNLCX	N/A	N/A	N/A	0.804%	-0.221%	0.591%	3.132%	4.560%	-2.514%	1.110%	1.059%
GSAMX	6.294%	6.858%	2.750%	1.123%	1.376%	2.356%	4.683%	4.642%	-1.675%	2.276%	3.156%
GEIAX	2.912%	6.700%	2.720%	1.311%	0.523%	2.364%	4.528%	4.059%	1.105%	2.516%	2.914%
ONUAX	7.345%	5.838%	4.302%	1.700%	1.872%	2.525%	4.544%	0.811%	-12.724%	-0.594%	1.801%
MGSDX	4.948%	7.547%	4.135%	2.467%	2.037%	2.840%	4.511%	4.976%	-1.186%	2.636%	3.586%
MWUIX	N/A	N/A	N/A	N/A	0.892%	3.344%	5.313%	2.805%	-21.114%	-1.752%	-1.752%
PRTBX	4.994%	2.942%	0.532%	0.030%	0.257%	3.123%	3.805%	3.821%	1.309%	2.463%	2.313%
PCPSX	N/A	2.095%	3.730%	2.728%	2.105%	2.407%	4.942%	-2.254%	-19.778%	-2.516%	-0.503%
PULAX	N/A	N/A	N/A	N/A	N/A	N/A	3.730%	-2.201%	-19.746%	-6.072%	-6.072%
SIGVX	N/A	N/A	2.666%	0.730%	1.812%	2.454%	4.878%	5.435%	3.536%	3.623%	3.073%

Fund	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average Yearly Return between 2004 and 2008	Average Yearly Return between 2000 and 2008
SISSX	N/A	N/A	2.582%	1.159%	1.222%	2.991%	4.768%	5.322%	-2.031%	2.455%	2.288%
TGSMX	7.337%	5.925%	3.777%	0.909%	1.882%	2.286%	4.342%	4.563%	-4.352%	1.744%	2.963%
TSDOX	6.987%	5.807%	2.665%	1.356%	1.745%	2.926%	5.292%	4.648%	0.538%	3.030%	3.551%
TCUUX	7.379%	6.459%	4.013%	1.592%	1.638%	2.999%	4.741%	5.537%	4.215%	3.826%	4.286%
NVSAX	6.823%	5.524%	3.033%	1.505%	1.077%	2.136%	4.223%	3.902%	-7.176%	0.833%	2.339%
WUSDX	6.754%	4.280%	0.832%	2.262%	1.952%	3.281%	5.115%	3.399%	-6.631%	1.423%	2.360%
SADAX	6.316%	4.024%	0.456%	2.091%	1.587%	3.485%	4.908%	3.212%	-6.848%	1.269%	2.137%
ASDAX	N/A	N/A	N/A	1.335%	0.737%	1.984%	4.160%	5.351%	4.410%	3.328%	2.996%
BRIVX	N/A	N/A	N/A	N/A	-0.042%	2.090%	4.058%	2.996%	-10.215%	-0.223%	-0.223%
CULAX	N/A	N/A	N/A	N/A	N/A	N/A	0.806%	5.203%	2.981%	2.997%	2.997%
CFSBX	N/A	N/A	0.492%	1.652%	1.293%	1.403%	N/A	N/A	N/A	1.348%	1.210%
CMGUX	N/A	N/A	N/A	N/A	0.900%	2.346%	4.666%	2.618%	0.322%	2.170%	2.170%
DFIHX	6.726%	5.763%	3.898%	1.612%	0.893%	2.301%	4.777%	5.188%	4.021%	3.436%	3.909%
FCSCX	N/A	N/A	N/A	-0.651%	2.797%	1.681%	3.745%	4.481%	3.288%	3.198%	2.557%
GMSIX	7.401%	4.992%	-4.623%	1.651%	2.848%	3.362%	6.387%	2.738%	-14.010%	0.265%	1.194%
JUSUX	N/A	N/A	N/A	N/A	N/A	2.694%	5.088%	1.175%	-12.318%	-0.840%	-0.840%
FISAX	6.698%	6.445%	3.418%	1.221%	1.795%	2.060%	4.147%	5.028%	3.580%	3.322%	3.821%
OGUCX	N/A	0.163%	3.682%	1.406%	1.361%	1.918%	4.077%	0.411%	-13.186%	-1.084%	-0.021%
PSHAX	6.882%	5.213%	2.449%	2.143%	1.333%	2.334%	4.210%	4.187%	-1.614%	2.090%	3.015%
PFTCX	6.565%	4.892%	2.141%	1.837%	1.029%	2.029%	3.900%	3.877%	-1.910%	1.785%	2.707%
PYLMX	6.920%	6.236%	2.386%	1.198%	1.089%	2.540%	4.496%	2.002%	-2.118%	1.602%	2.750%
PFIAX	N/A	N/A	N/A	N/A	3.657%	4.968%	8.597%	0.226%	-24.972%	-1.505%	-1.505%
SMRPX	5.011%	5.117%	1.924%	1.064%	1.003%	2.564%	5.253%	4.671%	4.136%	3.525%	3.416%
SAMLX	N/A	N/A	0.137%	0.969%	1.199%	3.200%	4.905%	5.021%	-3.388%	2.188%	1.720%
SWYSX	5.942%	6.052%	2.887%	3.060%	2.369%	3.386%	5.622%	-0.989%	-35.391%	-5.001%	-0.785%

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