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March 23, 2015

Via Electronic Filing

The Honorable Jacob Lew
Chairman
Financial Stability Oversight Council
1500 Pennsylvania, Ave., NW
Washington, DC 20220

Re: Request for Comment on Asset Management Products and Activities

Docket No. FSOC-2014-0001

The Report on Asset Management and Financial Stability of the Office of Financial Research

Dear Secretary Lew:

Strategic Insight, a mutual fund research and business intelligence firm that I co-founded in 1986, has observed the mutual fund industry for nearly 30 years. I hope our comments in the attached report are helpful to the FSOC.

During every crisis over the past three decades, and longer, capital preservation driven withdrawals by mutual fund investors were always limited in magnitude (in aggregate, generally adding up to under 2% of assets even during the most alarming monthly periods) and very short in duration (a few days, a few weeks). Stock fund portfolio managers, using their cash and liquidity facilities, buffer investor redemptions in times of crisis. For example, during October 2008, stock funds' PMs net sold an amount equal to only 0.4% of all assets held in such funds. Such stock net liquidations by PMs equaled just one-third of investors' net redemptions from stock funds during the month (investors net redemptions were under 2% of all stock fund assets under management during October 2008).

The magnitude of bond fund redemptions during times of financial stress were a bit different, but the patterns of such redemptions were largely similar. In separate chapters of this report we discuss these historical patterns of stock and bond fund redemptions; the industry's developments that make high redemption risks smaller, not larger, today; and why we have concluded that the FSOC concerns of systemic risk posed by large mutual funds and large mutual fund managers are unwarranted.

It is my view that the heterogeneous nature of mutual fund investors, and the rising and dominant share of mutual funds invested through buy-and-hold asset allocation programs, suggest that mutual funds and their management companies will never pose systemic risks.

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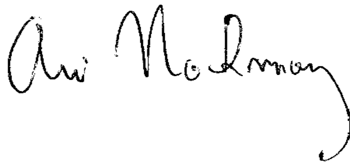
Each large mutual fund and each large mutual fund management company serve hundreds of thousands, at times millions, of individual investors within hundreds of distribution platforms – with accounts held by individual investors averaging between $20,000-$50,000. Most of these investments are targeted for very long-term savings for retirement, with 30-50 year horizons of accumulation and distribution.

These millions of investors, hundreds of distribution platforms, and hundreds of thousands of financial advisers, have never acted in a herd-like redemption pattern implied by the FSOC.

It is my view that large mutual funds and fund management companies, through their extraordinary diversification of investors and marketplace presence, are actually more stable than are smaller investment pool with more concentrated investor bases.

Lastly, I believe that the U.S. lessons and observations, as suggested in our report, equally apply to funds offered globally in other sizeable and maturing mutual fund markets.



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Mutual Funds and Systemic Risk: The Reassuring Lessons of Stability Amid Past Periods of High Financial Markets Volatility

Comments: Docket Number FSOC-2014-0001

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Mutual Funds and Systemic Risk: an Introduction

The Financial Stability Oversight Council (FSOC) has issued notice seeking public comment on aspects of the asset management industry – in particular whether asset management products and activities may pose potential risks to the U.S. financial system in the areas of liquidity and redemptions, leverage, operational functions and resolution, or in other areas. FSOC invited public comment as part of its ongoing evaluation of industry-wide products and activities associated with the asset management industry (docket number FSOC-2014-0001).

U.S. and global regulators' concerns about systemic risk were put in motion in the 2013 report by the Office of Financial Research ("OFR") of the Department of U.S. Treasury, which, at the request of the Financial Stability Oversight Council, prepared a study entitled "Asset Management and Financial Stability" published in September 2013. The report raised concerns about systematic risk triggered by mutual fund redemptions, among other issues. Following the publication of the OFR report, the U.S.'s SEC, as well as the International Organization of Securities Commissions ("IOSCO"), have asked for input on the issues raised by the OFR report. **Strategic Insight's observations, some captured in an earlier version of this updated report, were shared with the SEC on November 1st and can be found on the SEC's Comment page.**

Key takeaways from Strategic Insight's analysis on mutual fund redemption patterns during times of financial stress:

- Strategic Insight's research over the past 25 years concluded that during every financial crisis over the past three decades, and longer, capital preservation driven net withdrawals by mutual fund investors were always very limited in magnitude (generally under 2% of assets monthly, even during the most alarming periods). Furthermore, atypical high redemption rates were very short in duration (just a few days, or a few weeks).

- Similarly reassuring, stock fund portfolio managers buffer investor redemptions in times of crisis.

    - For example, during the harrowing October 2008, stock funds' portfolio managers net sold an amount equal to only 0.4% of all assets held in such funds. During that month, net liquidations from stocks by portfolio managers equaled to less than one-third of investors' net redemptions from stock funds.

    - Such investor net redemptions were less than 2% of all stock fund assets under management during October 2008 – also negating the "Herding" theory.

- In aggregate, bond fund redemptions during past periods of rising interest rates, or triggered by other concerns, experienced similar patterns of limited magnitude (as a proportion of invested assets) and short duration, after which redemption pressures subsided. For example, bond fund net redemptions in aggregated during October 2008 equaled just 2% of these funds' assets under management.

- Naturally, individual funds at times may experience significant redemptions over a short period. But it is our view that large mutual funds and fund management companies – the focus of the FSOC's concerns – are actually more stable than are smaller investment

pools with more concentrated investor bases, due to such large entities' diversified ownership by millions of individual investors and their wide and varied marketplace presence.

- Large stock and bond mutual funds have relationships with hundreds of thousands of investors (or more), each with their own unique circumstances. The average investor owns just $20,000-$30,000 in a typical stock fund, and a bit more in bond funds. Large mutual fund management companies each have relationships with millions of investors who have never acted in a herd-like manner as implied by FSOC concerns, throughout the many crises of the past 50 years.
  - If any, we suggest that the G-SIFI conversations should find comfort in the fact that, among the largest mutual funds, ownership is extraordinarily diverse – across millions of investors at hundreds of platforms. Thus the very large mutual funds are inherently stable. **It is not surprising that the mutual fund industry never experienced the harmonized and sizeable redemption behavior associated with the "Herding" theory and its implied systemic risk.**

- **The heterogeneous nature of mutual fund investors; the dominant and further rising share of mutual funds invested through buy-and-hold asset allocation programs; the reality that the great majority of fund investments are targeted for retirement savings with 30-50 year horizons for accumulation and distribution; and the transition of traders and market timers (institutions and individuals) out of mutual funds and into ETFs, all suggest that stock and bond mutual funds will never pose systemic risks.**

About Strategic Insight:

Strategic Insight ("SI") is a fact-based research and business intelligence firm focusing on the U.S. and the global mutual fund industry. SI was founded in 1986.

Strategic Insight pioneered the analysis of mutual fund cash flows more than 25 years ago. Today Strategic Insight Simfund databases track fund-level monthly flows, asset under management (AUMs), performance, fees, and additional data for over $35 trillion of mutual fund and ETF assets invested in the U.S. and globally.

SI's research and technologies are shared throughout the world with mutual fund management companies and industry's observers. In the U.S., SI research and business intelligence technologies are used by investment managers of over 90% of the U.S. fund industry's assets, as well as, industry consultants and observers, service companies, investment banks. SI's research and data is also shared with the S.E.C. and the Investment Company Institute, among others.

Globally, Strategic Insight research and business intelligence are provided to investment managers and marketplace participants benefiting from expanding demand for mutual funds in Europe, Asia, Canada, Latin America, and Australia. SI offers its services from offices in the U.S. and Canada, as well as from London, Hong Kong, and Melbourne.

An earlier version of this Strategic Insight report was shared with the S.E.C. on November 1, 2013 and is posted online on the SEC's Comment page. It was also shared with IOSCO, the International Organization of Securities Commissions.

This study's principal authors are Avi Nachmany, Executive Vice President, Research Director, and Co-Founder of Strategic Insight, and Dennis Bowden, SI's Managing Director, U.S. Research and Advisory. You may reach the authors at anachman@sionline.com or dbowden@sionline.com.

Chapter 1: An Introduction to U.S. Mutual Fund Shareholder Activity During Past Periods of Financial Markets Duress

The mutual fund vehicle continues to expand in importance as a key savings tool for an increasing number of investors around the world. Today, mutual funds (including ETFs) account for nearly $40 trillion in assets globally, including about $19 trillion in the U.S. With the growing acceptance of mutual funds across a widening range of countries and regions, the worldwide mutual fund marketplace becomes ever-more interconnected in a variety of ways – from the synergies of a truly global economy to the widening focus of fund firms' global fund distribution efforts to match the expanding range of investor demand around the world.

Within this context of expanding global acceptance and usage of mutual funds, the perception, focus, and policymaking initiatives of fund regulatory bodies around the world also continue to increasingly converge – with many fund rule-makers often looking to the experiences of the mature U.S. marketplace to guide their efforts. One area of emerging interest of both regulators and market participants is the concern related to the potential of systematic risk triggered by mutual fund shareholders redemption activity.

Strategic Insight's observations in this report are based on a number of sources, including SI's proprietary database (Strategic Insight Simfund) which tracks monthly each fund within the $35+ trillion global mutual fund industry. In this report we focus on the U.S. mutual fund experience. Also used for this study are data and research findings published by the Washington D.C.-based Investment Company Institute, the national association of U.S. investment companies.

This report includes commentary based on Strategic Insight's past studies. These studies, building on Strategic Insight's research since our foundation in 1986, were shared previously with fund managers, industry observers, and regulators (they are available upon request).

- What Will Investors in Equity Mutual Funds Do Now? (published 9/17/2001)
- Equity Fund Historical Retention Patterns Reassuring, Not Alarming (7/18/2002)
- Perspectives on Taxable Bond Fund Redemption Patterns (11/6/2009)
- Perspectives on Redemption Patterns Across Intermediary-Sold Distribution Platforms (8/10/2011)
- Lessons from Taxable Bond Funds' June 2013 Redemption Activity Across Distribution Channels (8/27/2013)

Chapter 2: The Big Picture: Looking Back, Looking Forward

In studying the experience of the U.S. marketplace – and its lessons for both the U.S. and global fund industries moving forward – it is important to understand several key foundational characteristics:

- Mutual funds are widely accepted in the U.S. Their ownership is encouraged by the marketplace and enabled through regulatory initiatives. More than 80% of wealthy households in the U.S., and nearly half of all American households, invest in mutual funds – a share attributable to the high degree of satisfaction and use of funds across all income levels. The average fund account held by an individual investor in a particular fund is under $30,000.

- According to the ICI (February 2015, Profile of Mutual Fund Shareholder 2014), the "Typical" Mutual Fund Owner is middle-aged, employed, educated, married or living with a partner, of moderate financial means, with $85,000 in household income and $200,000 in household financial assets. He or she owned investments other than mutual funds; had more than half of the household's financial assets (excluding the primary residence) invested in mutual funds; had $103,000 invested in four mutual funds, including at least one equity fund; and owned mutual funds in a retirement account, as well as outside employer-sponsored retirement plans primarily purchased through investment professionals.

- The $19 trillion U.S. fund industry has benefitted over the past three decades from the emergence of funds as the primary savings vehicle for retirement income, as well as from innovations in investment strategies. In combination with these factors, the open architecture culture in the U.S. for fund selection and portfolio construction has also contributed to the fund industry's ability to serve the expanding and diverse needs of a wide range of individual and institutional investors across an array of distribution channels.

- The U.S. mutual fund industry is dominated by retirement savings, and has benefited from a number of U.S. government initiatives since the 1970s encouraging such investments.

    - U.S. mutual fund investments dedicated for retirement savings within tax-advantaged accounts near $7 trillion. About two-thirds of the total assets in all U.S. equity and balanced mutual funds are held in such accounts, and during both bull and bear markets new stock fund investments are dominated by investors adding to their retirement savings.

    - In addition to these tax-advantaged retirement accounts, a significant portion of U.S. mutual fund investments in taxable accounts are also intended for long-term savings and retirement income. Overall, according to the ICI, the majority of U.S. fund investors (over 60%) have been introduced to mutual funds through their corporate retirement Defined Contribution plan. More than 90% of U.S. mutual fund investors (according to the ICI) use funds to "save for retirement" (whether in taxable or tax-advantaged accounts).

- About one-quarter of all stock and bond mutual fund assets under management in the U.S. are held in Defined Contribution (DC) retirement plans.

- Outside of DC plans, we estimate that about four in five individual investors in mutual funds have made the choice to be helped by a financial advisor (FA) for the management of some, or the majority, of their mutual fund investments.

  - For investors choosing to be assisted by a FA, the methods through which funds are sold have dramatically changed over the years. During the 1980s-1990s, most funds were sold one-fund-at-a-time and FA compensation was primarily paid at the point-of-sale. Today, most funds are purchased wrapped within an asset allocation portfolio, and compensation to the FA is mainly structured as a fee-for-advice encouraging long-term investment perspective.

  - Strategic Insight estimates that today over 80% of fund purchases with the assistance of a financial advisor incorporate some form of asset allocation.

- Whether invested in a DC plan, managed by investors on their own, or guided by financial advisors, the majority of the fund industry's assets have shifted to be heavily weighted by asset allocation programs using multiple funds, or held in a single fund offering a combination of stocks and bonds (such standalone balanced funds, flexible asset allocation funds, target-date funds, etc. oversee more than $3 trillion of U.S. mutual fund assets in total today). Consequently, the risk of large, harmonized, and persistent redemption activity has trended down even further.

This primarily long-term, retirement-focused asset allocation culture in the U.S. has translated to consistently reassuring lessons around the characteristics of mutual fund redemptions during past periods of high financial markets volatility and duress.

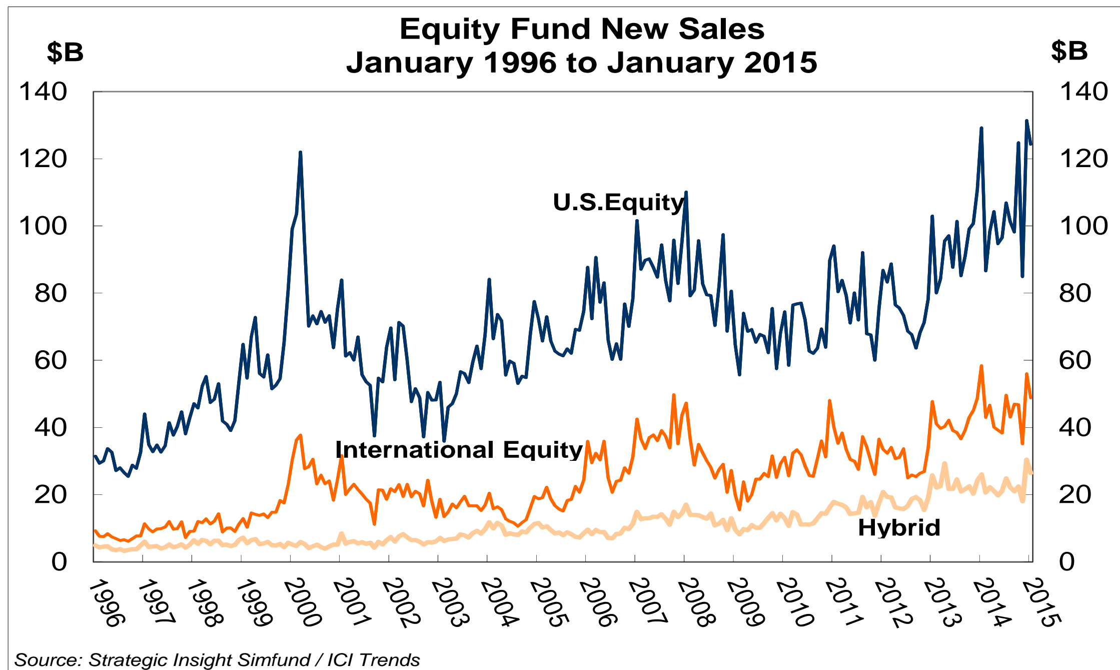
- Fears of a vicious circle of mutual fund redemptions following stock market breaks, which would in turn feed further price declines and even more redemptions, were time and again disproved by actual events during past stock market declines.

  - **Looking back at 50 years of mutual fund history, Strategic Insight has concluded that capital preservation driven withdrawals were always short lived, non-recurring, and limited in magnitude.**

  - During times of lengthy financial uncertainty, investors reduce (not increase) the turnover of their financial assets; thus redemption activity tends to decline during a bear market, with the exception of brief (a few days, a few weeks) and modest spikes during sharp down-market days or weeks. Investor psychological aversion to realizing losses explains part of such bear-market behaviors.

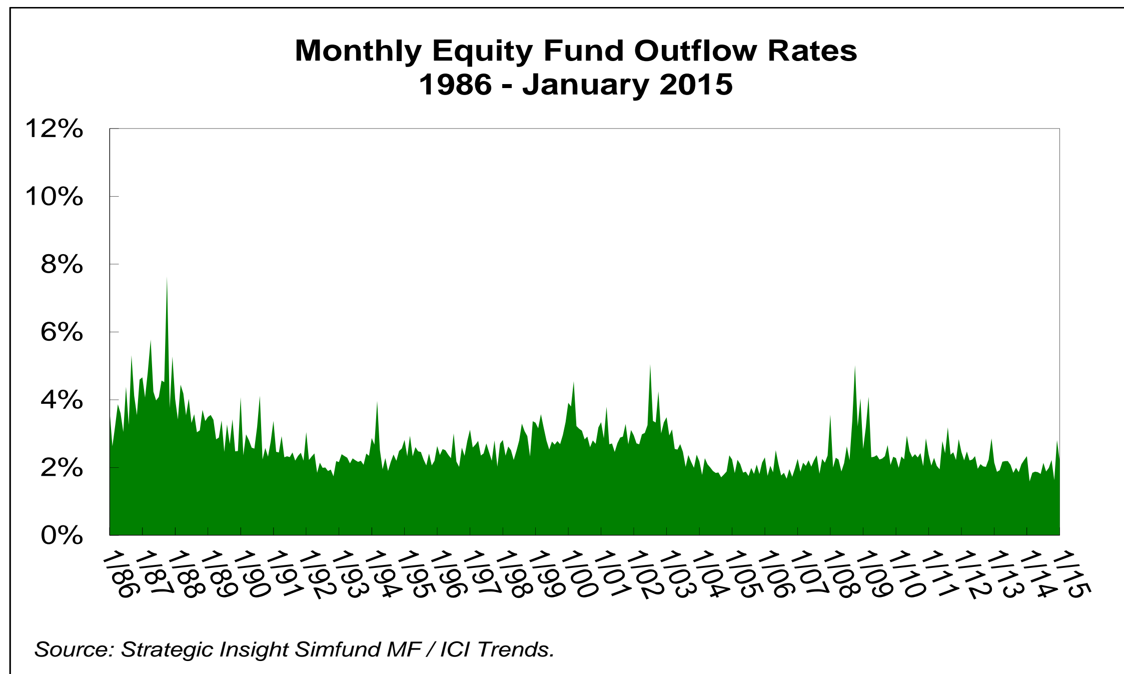
Chapter 3: Stock and Balanced Mutual Funds – Redemption and Liquidity Management

Overall, the major change for equity mutual funds in an extended period of market uncertainty, as in the past, will not be overwhelming redemptions but rather a decrease in new purchases. But the benefits of steady retirement investing, dollar-cost-averaging deposits, and opportunistic buying (at lower stock prices) will prevent equity fund net redemptions from remaining sustained and large. The uptrend, downtrend, and recovery of stock fund sales over the past two decades are illustrated below.



Data excludes ETFs.

The data in the following chart shows equity fund redemption rates for each month since 1986 – a period during which assets held by such funds grew nearly 100 times, from about $100 billion to nearly $10 trillion. Yet, average monthly turnover rates have remained stable, actually trending down. Opportunistic switching, common among some fund investors in the late 1980s, has become marginal in the fund business today. The industry's rejection of many such clients, and the likely poor performance results of many over-confident active traders, both contributed to lowering the frequency of timing activity in funds over the years. Also, the migration of such traders to Exchange-Traded Funds (ETFs) further reduced their relevancy to core mutual funds.



Data for stock and balanced/hybrid mutual funds, excludes ETFs.
Monthly outflow rates= redemptions and intra-family exchanges, as a % of average fund assets

Some key additional observations:

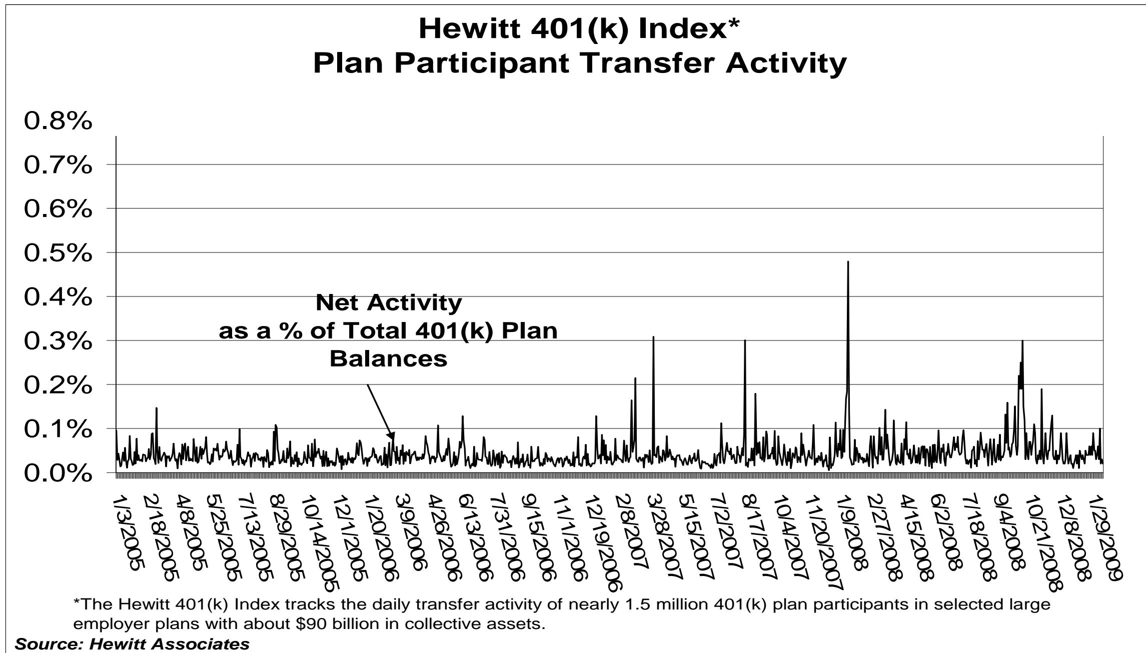
- The chart above captures the reassuring phenomenon of overall stock fund asset stability by measuring the pattern of transferring money out of equity (or balanced) funds. It combines two types of outflows reported by the ICI: redemption activity out of the fund family and intra-family fund exchange redemptions.

    - As illustrated above, constant asset attrition and periodic spikes are inherent traits of the asset management business. Industrywide, monthly turnover ratios typically fluctuate within a narrow range, around 2-3% of assets, and only rarely exceed these ranges – including during periods of market volatility and uncertainty. Even when they do, redemption spikes are modest, short-lived, and non-recurring.

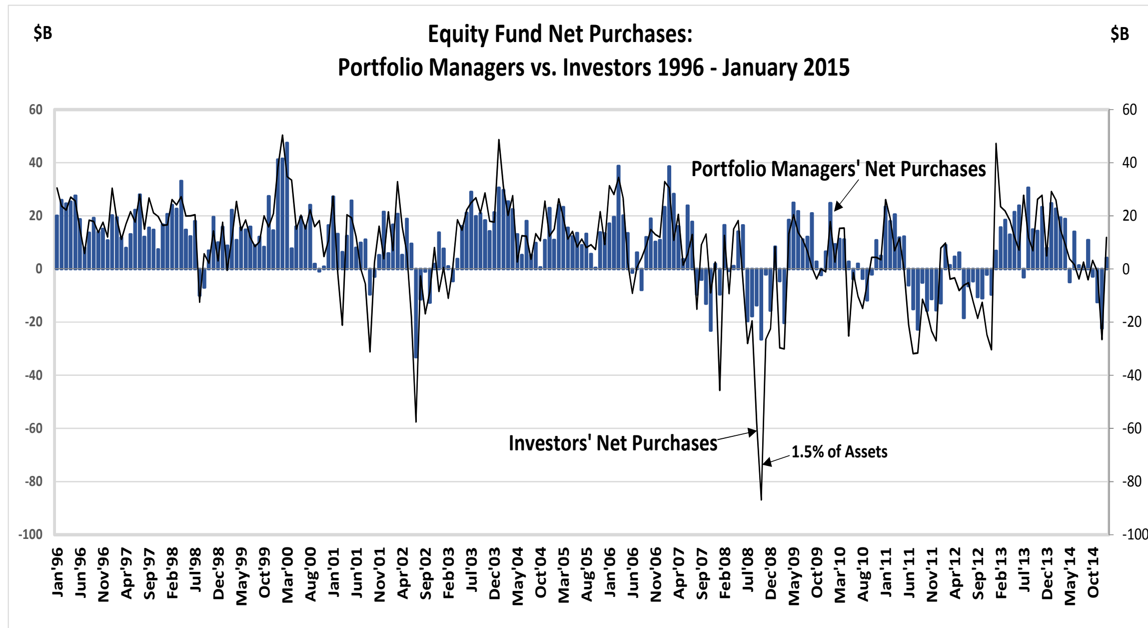
- Naturally, purchases by investors counterbalance redemptions each month. As suggested above, equity fund investors increase their redemption activity only modestly even during periods of extreme market stress. So the net liquidity pressure of ‘redemptions and new purchases’ is lesser than suggested in the above graph.

As we noted previously, stock fund investments held in tax-advantaged retirement accounts (Defined Contribution plans, IRAs, variable annuities) make up about two-thirds of all stock fund assets under management (with likely a large portion of the other one-third also held for very long term retirement purposes). Such investments – at times held for a 30-50 year time horizon (accumulation and distribution; naturally with some rebalancing and changes during the period) are increasingly owned within asset allocation programs (such as target-date funds) – and tend to exhibit lower-than-average attrition rates and redemption activity even during times of crisis.

An illustration of this reality can be seen in data based on Hewitt Associates tracking of nearly 1.5 million 401(k) plan participants, holding nearly $100 billion of assets held around the 2008-2009 crisis. The data, captured in the chart below, shows that even during the panic months of September – October 2008, daily redemptions out of this large and representative sample did not exceed 0.3% of asset in any single day, and the slightly elevated activity subsided within a few days or weeks.



Another important aspect to the relationship between mutual fund redemptions and potential systemic risk lies in the actions of fund portfolio managers ("PMs"). Reassuringly, even during the darkest days of financial crisis, portfolio managers of equity funds net redeemed only modest amounts. For example, during October 2008, fund investors redeemed under 2% of aggregate stock fund assets (ICI reported $87 billion of such net redemptions out of about $5 trillion of assets). During the same month, portfolio managers net redeemed just $26 billion of stocks according to the ICI – an amount equal to only 0.4% of assets held in stock funds, and under one-third of the net redemptions by stock fund shareholders. This phenomenon is illustrated in the chart below.



Source: ICI, Strategic Insight Simfund ** Includes equity and balanced/hybrid funds*

A few additional notes on the chart above:

- Industrywide, PMs of stock funds have over $400 billion in cash, liquid ETF holdings, and other liquidity facilities. In aggregate, such cash and additional liquidity facilities held by equity funds are well above the maximum range of monthly outflows which the mutual fund industry has experienced even during the most volatile periods.

- Funds' cash holdings serve not only as a buffer against excessive short-term liquidations in a bear market, but also support equity price levels through opportunistic buying of cheaper stocks by portfolio managers. The chart above captures such activity a times.

    - The structure of the mutual fund business drives the reality that portfolio managers almost always act as a buffer – their purchasing patterns lag investor buying activity, and their redemptions also lag and mitigate short-term emotional redemptions by investors.

- **Most important, highlighted above, is the significantly smaller net redemptions by Portfolio Managers, along with examples of positive net purchases, during**

months of elevated net redemptions by fund shareholders. The evidence suggests that on a short-term basis, mutual fund portfolio managers at times provide positive liquidity to the stock markets, often counterbalancing downward price movements.

- **In summation: stock fund investors have never redeemed en-masse. And their portfolio managers have net liquidated little even in times of large stock market price declines. Mutual funds and mutual fund management firms have not in the past, and we believe will not in the future, trigger systematic risks to the financial market.**

Additional Research on Mutual Fund Redemptions

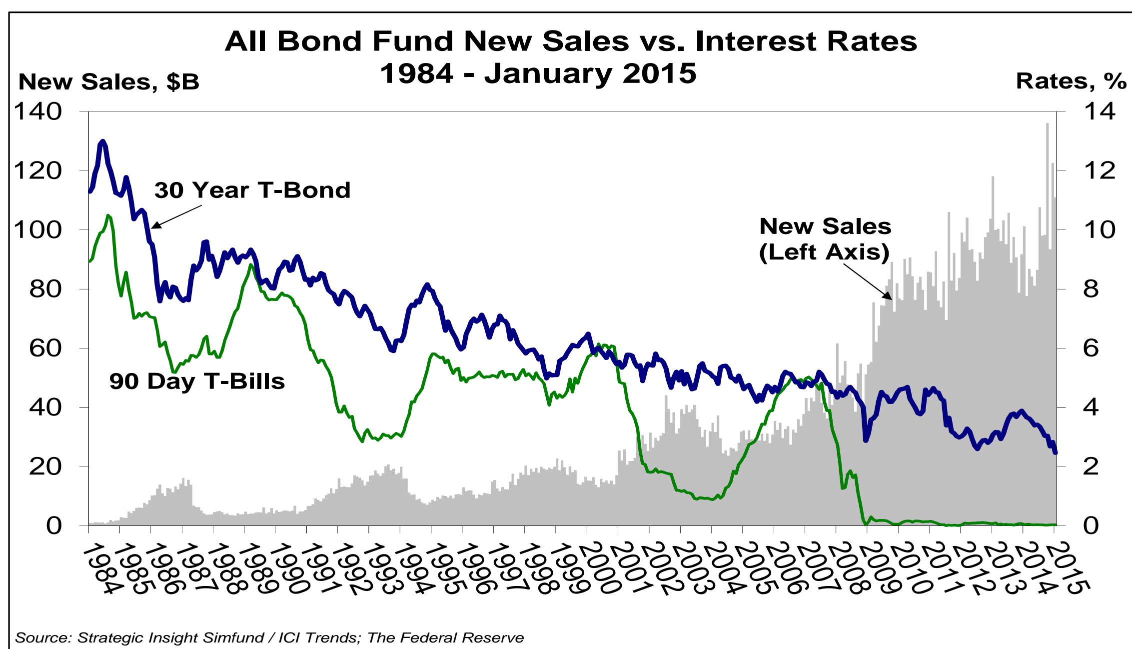
- The Investment Company Institute has also published over the years a number of studies of shareholder redemption activity.
    - One such study was published 17 years ago (in early 1996, http://www.ici.org/pdf/per02-02.pdf). It reviewed redemption activity during 50 years, 1945 – 1995, and concluded, "In none of stock market breaks and sharp declines in equity prices, have stock fund owners liquidated shares en masse". In the 17 years since the publication of this report, each market correction – and each subsequent crisis – witnessed a repeat of the important and reassuring observation of this ICI study.
    - Another truism of the mutual fund industry is that most fund investors are inactive even during periods of great financial uncertainty. This was exemplified by the ICI's Fundamental review, "Redemption Activity of Mutual Fund Owners" in March 2001 (http://www.ici.org/pdf/fm-v10n1.pdf). This study contrasted the multiple redemption actions each year by a small number of shareholders with redemptions or rebalancing actions taken by over 80% of the other investors. Subsequent studies reaffirmed such general observations.

Chapter 4: Bond Mutual Fund Redemption Patterns

Since the 2008 crisis, net inflows to bond mutual funds have eclipsed $1.4 trillion – with assets in such funds today exceeding $4 trillion in total. About 20% of bond fund assets are in diversified index funds and index ETFs, with the balance in actively-managed strategies.

The significant acceleration of bond fund sales post-2008 is noted below. Also of note is how such sales activity was influenced by interest rate trends, and how the pattern of such influence has evolved. In the 1980s and 1990s, many investors purchased or redeemed bond funds in reaction to short term performance and interest rate moves. For example, as illustrated below, during 1987 and 1993/1994, following the spikes in short-term interest rates, bond fund sales declined dramatically.

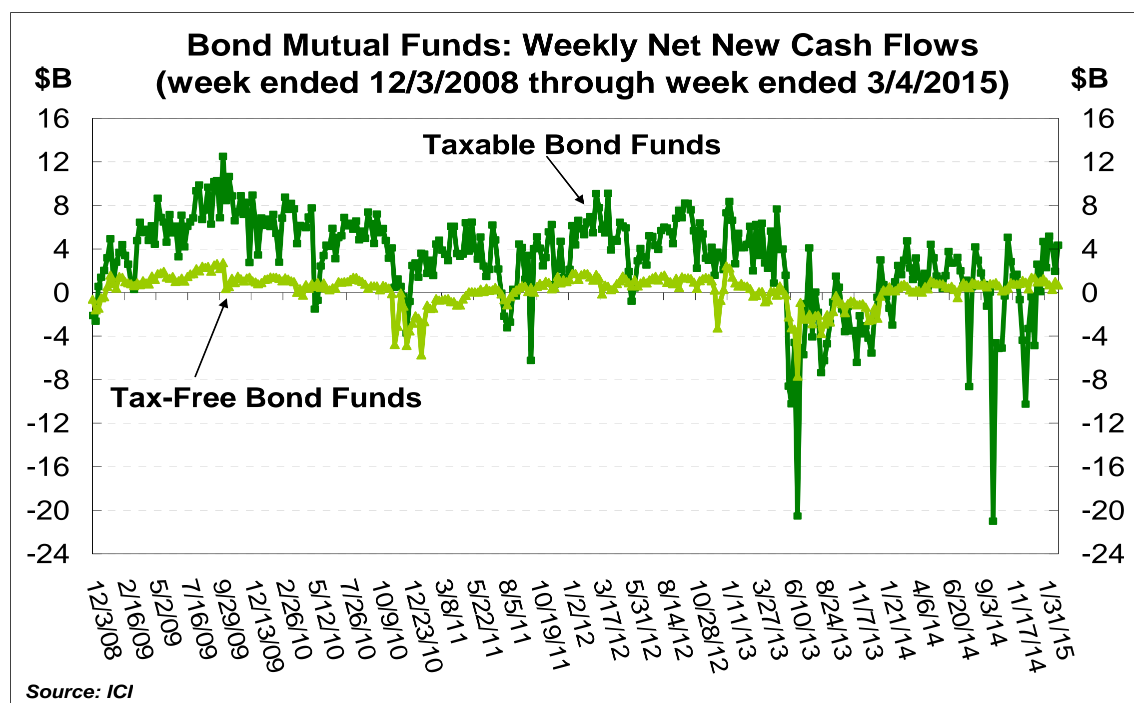
Beginning in the mid 2000s, investors and advisors increasingly used bond funds in combination with other investments within asset allocation structures. As the mutual fund industry accelerated its transition to an 'asset allocation culture' after the 1999-2000 'bubble', bond fund purchases by investors – increasingly as part of more holistic diversified asset allocation approaches – became more stable and less driven by short-term interest rate trends. For example, when short-term interest rate rose in 2004-2007, bond fund sales remained somewhat stable, and did not collapse as was the case in prior periods of up-trending short-term interest rates.



Demand for bond mutual funds has been strong and fairly persistent in the post-2008 period of shifting sentiment among investors and their advisors to more conservative asset allocation (in light of what Strategic Insight has dubbed 'a semi-permanent state of investor anxiety'). Bond funds, however, do experience periodically defensive redemptions, often triggered by rising interest rates (or other concerns).

The data in the following chart shows the weekly flow trends among bond funds since December 2008, as reported by the ICI (later in this report we provide an analysis of bond fund activity during the depth of the 2008 financial crisis). The graph shows a few weeks

during which about $20 billion were net redeemed out of all taxable bond funds. Such spikes amounted to about 0.7% of aggregate assets of such funds; naturally some individual funds at times experience larger relative redemption pressures.



Note that the September 2014 spike in net redemptions is mainly related to withdrawals out of PIMCO Total Return fund, and the parking of large portions of such money in cash or ETFs. The industry's flagship bond fund, PIMCO Total Return, experienced net redemptions of 11% of its assets last September (most occurring during the last few days of that month following Bill Gross's departure). Another 14% of the fund's assets net redeemed in October, followed by 5% and 12% of assets net redeeming in the following two months, respectively.

Interestingly, and despite extraordinary redemptions, the investment performance of the PIMCO fund roughly matched that of its peers (as compared to the Intermediate-Term Bond Morningstar Category) during the closing months of 2014. The nearly $80 billion of net liquidations out of this fund during the September to December 2014 period, representing over one-third of this flagship fund's assets, did not result in price dislocation for the fund or for the bond market.

Strategic Insight Simfund database identifies about 50 actively managed bond funds with over $10 billion under management each. These 50 funds' investment strategies span across nearly 25 different categories, naturally making the impact of market-driven liquidity pressures diffused. (Only one such fund, PIMCO Total Return, is larger than $100 billion – at $125 billion (as of February 2015), this fund is nearly half of its peak size during 2013.)

Typically these large bond funds (where systemic risk concerns of massive herd-like redemptions and their impact on the financial system are centered) are owned by hundreds of thousands of shareholders, and in a few cases more than one million shareholders. Such shareholders on average own $20,000-$50,000 each in such a fund (within funds owned

mainly by individuals). Bond funds with high allocations of institutional investors can at times carry average account sizes exceeding $100,000.

Clearly, with hundreds of thousands of shareholders, the probability of significant and lasting herd-like and harmonized massive redemptions – beyond funds' available liquidity facilities – is extremely low. This reality has been observed repeatedly in the mutual fund industry during any period of market stresses over the past 30 years.

Another illustration of the stability benefits around diversification of ownership of bond funds can be found by further examining PIMCO Total Return fund's pattern of ownership, as charted in the table below. The ten intermediary distribution platforms listed below together own about two-thirds of PIMCO Total Return fund's assets. Each of these platforms experienced significant redemptions from the fund (as a proportion of assets) during the September to December 2014 period. In some cases, the pace of redemptions was extraordinary. Yet, the fund managed these liquidity pressures without impacting its relative returns, as noted previously. In addition, the fund and its various distribution partners managed the orderly unwinding of shareholder positions and the return of capital to investors.

PIMCO Total Return Fund:
Ownership and Flow Patterns among Leading Intermediary Distribution Platforms

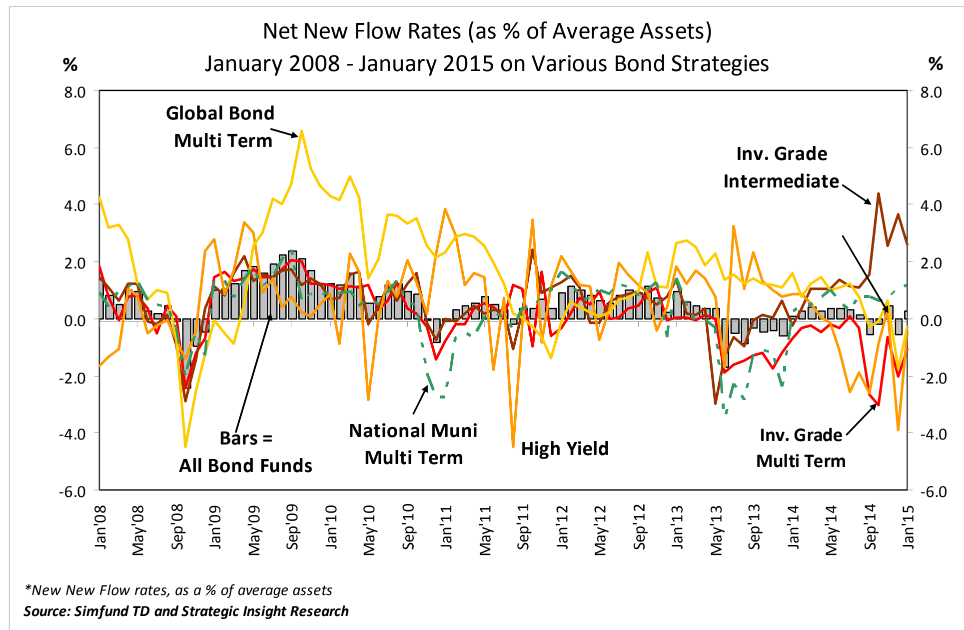
	Monthly Net Flows as a % of Assets, Estimated						
	Jun'14	**Jul'14**	**Aug'14**	**Sep'14**	**Oct'14**	**Nov'14**	**Dec'14**
Large Private Bank	-8%	-2%	15%	-21%	-13%	-5%	-35%
Large Private Bank	-16%	0%	-1%	-5%	-16%	-4%	-7%
Large Retirement Platform	-2%	-4%	-1%	5%	-11%	-6%	-16%
Large Retirement Platform	-1%	0%	0%	6%	-9%	-2%	-11%
Large RIA Platform	-2%	-2%	0%	-15%	-16%	-5%	-10%
Large RIA Platform	-2%	-1%	-2%	-44%	-23%	-8%	-9%
Large RIA Platform	-1%	-1%	-1%	-14%	-19%	-5%	-7%
National BD	-3%	-2%	-2%	-8%	-19%	-7%	-7%
National BD	-1%	-4%	0%	-13%	-12%	-3%	-15%
National BD	-1%	-1%	-5%	-43%	-18%	-6%	-8%
Total Industry PIMCO Total Return	**-2%**	**-1%**	**-2%**	**-11%**	**-14%**	**-5%**	**-12%**

Source: Strategic Insight Simfund, SI estimates (using AUM data provided by Access Data, a Broadridge company)

Could Large Bond Funds be a Source of Systemic Risk During the Coming Years of Rising Interest Rates?

It is inevitable that some of the massive inflows into bond funds experienced over the past six years would "unwind" in the coming decade. A portion of these investments may migrate further out on the risk curve to stock and balanced investments as economic confidence levels continue to recover. Yet, we suspect that a majority of bond fund assets, compartmentalized in investors' minds as "income and safety money", may stay in bond funds or shift back to cash.

To provide context and background for bond fund redemptions during a period of heightened financial stress, we anchor our analysis below on the experience during the fourth quarter of 2008 as a case study for bond fund outflow patterns during times of extreme market and liquidity stress (discussed in coming pages). Beyond Q4'08, we also observe, as captured in the graph below, the various patterns of bond fund monthly net flow rates before, during, and after the 2008 crisis.

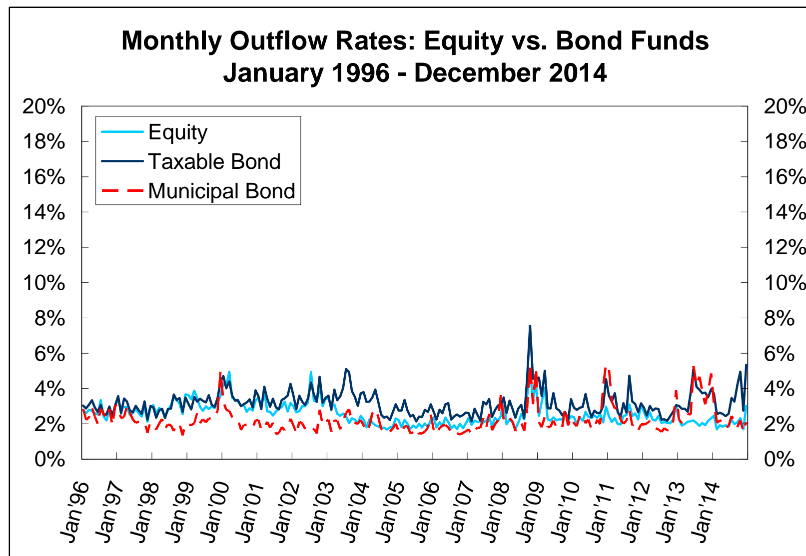


*New New Flow rates, as a % of average assets
Source: Simfund TD and Strategic Insight Research

The data above, observing trends among the largest bond investment categories (as defined by the ICI), identifies a few periods of significant monthly redemptions (as a % of assets) and thus liquidity pressures, but also demonstrates the very short term pattern of such net withdrawal – typically just over one month. The data shows that even during the most extreme period of bond fund liquidations during the past seven years, monthly outflows – for all categories combined (the bar graph above) - peaked at about 2% of asset under management (over the roughly 20 trading days during such a period) – a level naturally falling within the existing liquidity facilities of such funds. And such elevated redemptions were experienced for just one month (or less), sharply contracting in the following period. This is a very similar pattern to what we have observed among stock funds.

We believe that, as bond funds and bond fund segments grew significantly over the past six years, such fund have become much more diversified and heterogeneous in terms of their shareholders – and thus more stable.

The overall patterns of stock fund or bond fund redemptions tend to be similar. We share the following graph, which charts monthly outflow rates of bond and equity funds. The outflow rates portrayed in the chart account for redemption activity out of the fund family (and into either funds at another fund family, non-fund investments, or consumption) as well as intra-family fund "exchange redemptions" (from one taxable bond fund to other funds within the same family, whether a money fund, an equity fund, or a different bond fund).



Source: Strategic Insight Simfund TD / ICI Trends

Note: the chart above – of just "outflow" activity – should be studied together with the chart in the prior page – which combined both purchases and withdrawals – thus tracking the net activity each month. For example, "net redemptions" were only about 2% of bond fund assets during October 2008 – when the "outflow rate" peaked at near 8%.

As can be seen in the chart above, monthly outflow rates of bond funds (both taxable and municipal) have generally remained within a narrow 2.5 - 3.5% band over the past nearly 20 years. After an uptrend in taxable bond fund outflow rates during mid-2003 as the period of steeply declining interest rates from earlier in the decade started to reverse, a decline in overall redemption rate levels can be observed from mid-2004 through mid-2008, before a significant spike during the crisis of late 2008.

Taxable bond fund outflow rates tend to modestly exceed equity fund outflow rates, while municipal bond fund redemption pressures have remained, on average, slightly lower. With nearly two-thirds of all equity fund assets held in qualified retirement accounts, stock funds have benefited from the long-term focus of many individuals' retirement investing portfolios. Naturally, tax-free bond funds are owned by generally wealthier investors and are often used for wealth protection and income over the long term.

Overall, under one-half of all bond fund assets are held within retirement tax-deferred accounts. For many investors, assets held within these bond vehicles may be compartmentalized within investors' minds as "safety and income" money and thus at times are more prone to a pullback on the risk curve to more conservative cash-like vehicles during times of uncertainty.

Case Study: Redemption and Liquidity Management Observations from the 2008 Financial Crisis

During the heights of the financial crisis in the fourth quarter of 2008, stock and bond funds across virtually all investment categories experienced significant redemption activity. The substantial net outflows that took place within the bond fund space, combined with the widespread seizing of global fixed-income markets and the resulting massive levels of illiquidity, severely damaged the performance of many bond funds, as managers at times were forced to sell temporarily poor liquidity securities at depressed prices in order to meet redemption requests. This market environment created an ideal case study for examining the redemption behavior of bond fund investors amid significant market uncertainty.

Analysis of this period, as detailed in this section, offers a number of important takeaways on investor behavior and redemption pressures in a period of severe stress. Among our key observations and conclusions:

- Bond fund redemptions were elevated throughout the financial crisis period, but the most intense outflow pressures were relatively short in duration.
  - Outflow rates within taxable bond funds peaked in October 2008 at 7.7% in aggregate, before falling to 4.6% in each of November and December (as suggested earlier, net outflows were much smaller). This decline in redemption pressure following October's one month spike is also evidenced across most individual bond fund categories. These results reinforce the theme discussed earlier of extreme redemption pressures within mutual funds generally being short-lived in duration.
- The most intense redemption pressures during the heights of the crisis within the taxable bond fund space were witnessed among certain of the largest (and thus most diversified and often most liquid) funds – particularly within Investment-Grade bond funds (both short- and intermediate-duration).
  - These observations imply the use of some large funds by institutional investors to access liquidity during times of significant duress. As was evidenced in Q4'2008, some such institutions were most active in withdrawing cash, while many individual investors were more prone to inaction and thus less inclined to act in these uncertain times.
- By contrast, redemption pressures within High Yield funds – typically held by a high number of smaller individual shareholders – saw lower overall redemption pressures than Investment Grade offerings (despite average asset-weighted NAV losses of 16% among High Yield strategies). Also unlike the Investment Grade categories, the largest High Yield funds did not exhibit a significant spike in relative outflow rate patterns versus their smaller peers.
  - Such results reinforce the inherent stability characteristics of mutual funds with wide-ranging and diverse shareholder bases across hundreds of thousands of heterogeneous individual investors.

Redemption Pressures within Taxable Bond Funds in Q4'2008

From August 2004 to August 2008, taxable bond fund outflow rates averaged monthly 2.7% of assets. During the latter stage of 2008, redemption activity jumped. After rising to 4.5% in September 2008, the taxable bond fund outflow rate spiked to 7.7% during October (net outflow rate was lower as some purchases persisted). This rate remained elevated for the remainder of 2008 and into the beginning months of 2009 (though below October's peak) before returning to a normalized pace in April 2009. The combination of increased redemption requests and the simultaneous freezing of credit markets created a cycle which forced many funds to sell less liquid securities at discounts, further depressing fund performance and further feeding investor uncertainty.

The table below details the net new flow and total return data across non-government taxable bond categories during each month of Q4'2008. On an aggregate basis, taxable bond funds in total saw net outflows of $33 billion and an average asset-weighted total return of -6% during the month of October alone (although several categories experienced losses nearly three times as much). During November and December, however, most categories saw net redemption pressures subside significantly, while total returns also rebounded – and actually were positive across all but two categories in December.

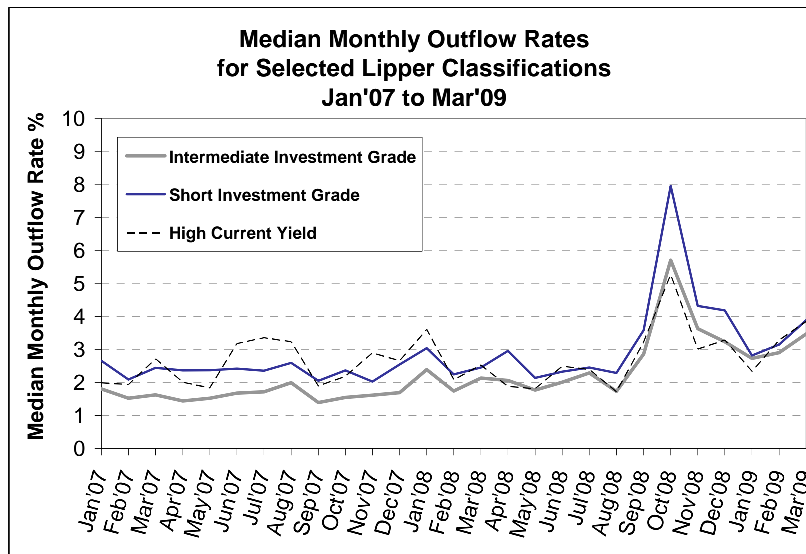
Q4'2008
Taxable Bond Funds (excluding Taxable Govt. Bond)
Category Flows and Performance

Morningstar Category	Net Flows $Billions			Net Flow Rate (as % of beginning assets)			Asset-Weighted Total Return %		
	Oct'08	Nov'08	Dec'08	Oct'08	Nov'08	Dec'08	Oct'08	Nov'08	Dec'08
Intermediate-Term Bond	**-15**	**-8**	**-1**	-2.9%	-1.6%	-0.3%	-3%	1%	4%
World Bond	**-4**	**-2**	**-2**	-5.9%	-3.5%	-2.9%	-5%	1%	5%
Multisector Bond	**-4**	**-2**	**0**	-4.6%	-2.6%	-0.6%	-12%	-6%	5%
Short-Term Bond	**-3**	**0**	**0**	-3.9%	-0.6%	-0.5%	-2%	-1%	2%
High Yield Bond	**-2**	**0**	**3**	-2.0%	-0.1%	3.1%	-15%	-8%	4%
Emerging Markets Bond	**-1**	**0**	**-1**	-7.3%	-3.1%	-5.8%	-20%	1%	6%
Bank Loan	**-1**	**-1**	**-1**	-4.1%	-4.0%	-3.4%	-13%	-7%	-3%
Ultrashort Bond	**-1**	**-1**	**0**	-4.7%	-5.3%	-2.0%	-2%	-2%	0%
Long-Term Bond	**0**	**0**	**0**	1.7%	-1.3%	0.5%	-10%	7%	12%
Totals for All Taxable Bond Funds	**-33**	**-14**	**-3**	**-2.4%**	**-1.1%**	**-0.2%**	**-6%**	**-1%**	**3%**

Source: Strategic Insight Simfund / ICI / Morningstar Categories

While the closing months of 2008 presented broad redemption pressures across virtually all asset classes, key differences are evident within different areas of the taxable bond space. By observing the outflow characteristics of various bond fund styles during this extreme period, we can uncover important insights into redemption activity across both the duration and quality spectrums that can help frame the potential impact of future bond fund liquidity pressures.

The following graph charts the median monthly outflow rate of three representative bond fund investment styles (Intermediate Investment Grade, Short Investment Grade, and High Current Yield). "Outflows" are measured as the sum of redemptions and exchange redemptions, as disclosed within funds' semi-annual NSAR filings with the SEC; and outflow *rate* derived by dividing outflows by the average assets over the period. Such data should be analyzed alongside net outflow rates, which also reflect the impact of net purchases. The three categories below serve as proxies for differences in redemption pressures across the bond fund duration and quality spectrums.



Source: Strategic Insight Simfund MF / Lipper (Classifications)

Some observations from the preceding chart:

- During the height of fixed-income marketplace liquidity pressures during Q4'08, Short Investment Grade funds experienced significantly higher redemption rates than did Intermediate Investment Grade funds. As outflows spiked to their peaks during October 2008, the spread in median outflow rate between the short and intermediate classes widened to 2.3%, over three times the average monthly spread between the two strategies from January 2007 to March 2009. We hypothecate that investors (especially institutional ones) sold their most liquid positions during this period, as they were seeking to raise cash wherever possible.

- Despite average NAV losses of 16% (asset-weighted) in October 2008, the High Current Yield fund category experienced a median outflow rate during that month which was lower than that of the Short Investment Grade and Intermediate Investment Categories (of note: many such funds are held by individual investors with fairly modest $20,000-$30,000 accounts. As previously discussed, such accounts experience very modest redemption spikes. In contrast, bond funds with a high share of very large balance institutional shareholders may redeem more quickly during stress periods.)

- Notably, High Current Yield funds also benefited from a dramatic recovery in inflows during November-December, attracting more than $2 billion on a net basis, while the Short Investment Grade and Intermediate Investment grade categories remained in net outflows over that period.

Managing Liquidity for the Extreme: the Heterogeneity of Taxable Bond Fund Redemptions during the Financial Crisis

To project liquidity pressures during times of significant shareholder redemption, we isolate the experiences of the most actively redeeming funds from those of others in the same three bond classifications: Intermediate Investment Grade, Short Investment Grade and High Current Yield. Such a detailed segmentation of bond funds in these three categories shows significant heterogeneity in the outflow patterns across individual funds and subsections.

The table below details the varying levels of outflow pressure experienced by funds within the three styles. Funds within each classification are separated into quartiles for each month based on their outflow rates during that month (1st Quartile representing the highest outflow rate funds, 4th Quartile the lowest). The table then charts the median rate within each of these quartiles over each month from August 2008 to December 2008.

Note that "outflows" in the table below are again measured as the sum of redemptions and exchange redemptions, as disclosed within funds' semi-annual NSAR filings with the SEC; and outflow *rate* is derived by dividing outflows by the average assets over the period.

Monthly Outflow Rate, by Quartile: Selected Investment Sectors

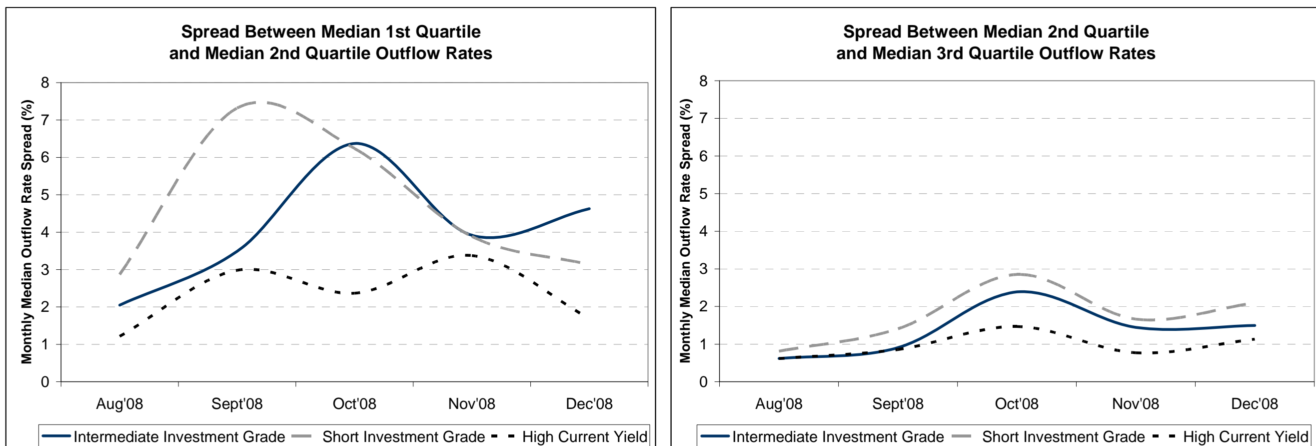
	Median Fund Outflow Rate (%)				
	Aug'08	**Sep'08**	**Oct'08**	**Nov'08**	**Dec'08**
Intermd. Investment Grade*					
Highest Outflow Rate Quartile	**4.1**	**6.8**	**13.3**	**8.3**	**8.6**
2nd Quartile	2.0	3.3	6.9	4.3	4.0
3rd Quartile	1.4	2.4	4.5	2.9	2.5
4th Quartile	0.6	0.8	2.2	1.4	1.0
Short Investment Grade *					
Highest Outflow Rate Quartile	**5.5**	**11.5**	**14.8**	**9.1**	**8.6**
2nd Quartile	2.6	4.1	8.5	5.2	5.4
3rd Quartile	1.8	2.7	5.7	3.5	3.3
4th Quartile	0.8	1.1	2.7	1.5	1.0
High Current Yield *					
Highest Outflow Rate Quartile	**3.3**	**6.8**	**8.1**	**6.9**	**5.6**
2nd Quartile	2.1	3.8	5.8	3.5	4.0
3rd Quartile	1.5	2.9	4.3	2.7	2.8
4th Quartile	0.6	1.6	2.6	1.4	1.4

Source: Strategic Insight Simfund MF (Lipper Classifications)*

Of particular note are the differentials in median outflow rates between quartiles across each classification, and the changes in these spreads as market conditions became more extreme during September and October of 2008. Particularly within the Short and Intermediate Investment Grade bond funds, there is significant disparity between the outflow rates

experienced by the highest quartile funds and those experienced by the rest of the peer group as overall outflow rates increased.

The two graphs below chart the differences in median monthly outflow rates between the 1st and 2nd quartiles (left graph) for each category detailed above, and also the difference between the 2nd and 3rd quartiles (right graph). The heightened redemption pressure experienced by the highest outflow quartile of funds within each category is clearly evident. Outside of this top quartile, however, the variance in outflow activity between quartiles decreases significantly. The data is very clear in showing that only a small number of funds experienced a significant elevation of outflow rate.



Source: Strategic Insight Simfund MF (Lipper Classifications were used)

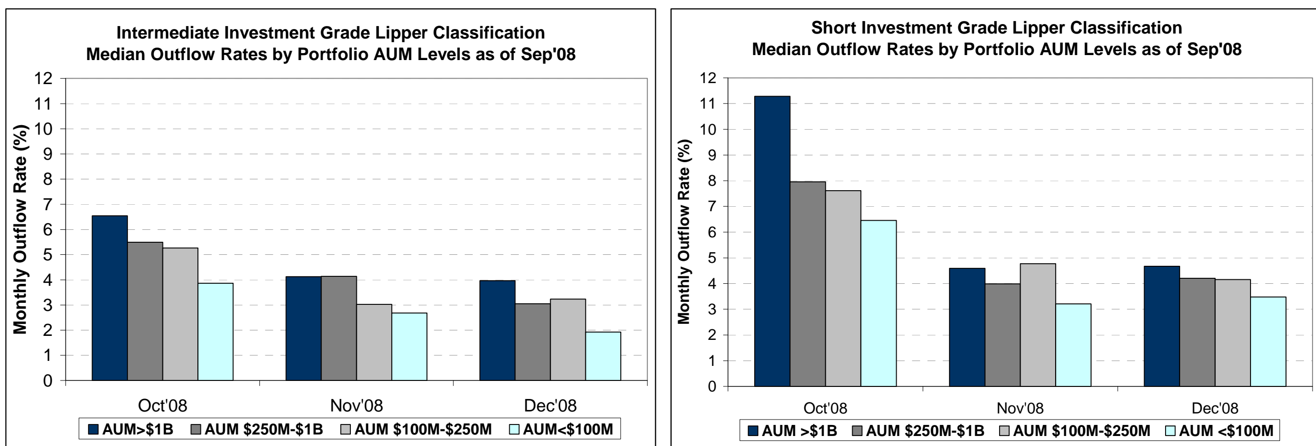
A few key observations:

- The pronounced short-term spike in relative redemption pressure experienced by the most actively redeeming **Intermediate and Short Investment Grade** funds during the periods of highest market anxiety is clearly depicted above.
  - Within the Intermediate Investment Grade class, the difference between the first and second quartile median outflow rates spiked significantly during October to more than 6%, up from 3.5% during September. Notably, however, this spread also eased nearly as quickly to just under 4% as markets stabilized somewhat in November. Conversely, the difference between the median outflow rates of the 2nd and 3rd quartiles within the category peaked at just 2.4% during October.
  - Within the Short Investment Grade class, the pronounced difference between the highest outflow quartile and the rest of the category began in September (spiking to nearly 7.5% vs. just a 1.4% spread between the 2nd and 3rd quartile medians) and carried into October (6.2% vs. a 2.9% spread between the 2nd and 3rd quartiles), as the collapse of Lehman Brothers and subsequent fall below $1 NAV by Reserve Primary spread massive fear throughout short term debt markets. Like the Intermediate category, however, this difference decreased significantly (to less than 4%) in November.
- Within the **High Current Yield** classification, outflow rates remained lower and more homogeneous across funds.

- o While the pattern of higher spreads between the 1st and 2nd quartile median outflow rates did hold within this classification, the outflow rates and differences between quartiles tracked well below those of the Intermediate and Short Investment Grade classifications during October.

- o In addition to less volatility at the high outflow end of the category, High Current Yield funds also exhibited the closest similarity in median outflow rates among lower quartiles, with the spread between the 2nd and 3rd quartile medians peaking at just 1.5% during October.

Interesting patterns can also be observed when analyzing the outflow pressures faced by similarly mandated funds of varying asset levels. The graphs below capture groupings of funds based on assets under management as of September 30, 2008, and chart the median outflow rates for these peer groups in each month of Q4'2008 separately for the **Intermediate Investment Grade** and **Short Investment Grade** classifications.



Source: Strategic Insight Simfund MF (Lipper Classifications were used)

Within each of the Intermediate and Short Investment Grade classifications charted above, outflow rates across all asset levels can be seen peaking during October 2008 and generally trending significantly lower during November. Of note, however, are the redemption pressures faced by larger funds versus those of smaller funds within each category. Within both the Intermediate and Short Investment Grade classifications, funds with assets of over $1 billion faced especially intense outflow pressures during October's increased market uncertainty and investor defensiveness.

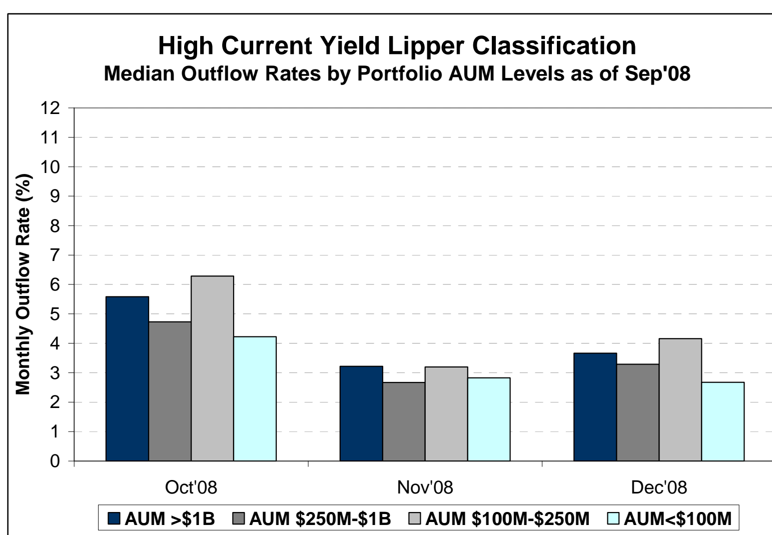
- The median October outflow rate among Intermediate Investment Grade funds with assets of over $1 billion was a full percentage point higher than the median among funds with assets between $250 million and $1 billion, and that difference expanded as asset levels decreased.

- Among Short Investment Grade funds, the difference between the median October outflow rates of the top two asset size peer groups was even more pronounced at 3.3%.

- Interestingly, this differentiated redemption pressure in each category among larger funds during October'08 was unique to that period of extreme fixed income market turbulence. During November'08, median outflow rates within these same peer groups of funds with over $1 billion in assets each decreased sharply from their October levels and were much more in line with the redemption patterns seen across the other asset levels charted above.

These observations imply the institutional use of the largest (and thus most diversified and often most liquid) funds. **During times of significant duress, as was evidenced in 4Q 2008, some such institutions were most active in withdrawing cash, while many individual investors were more prone to inaction and thus less inclined to act in these uncertain times.**

An examination of outflow rates by asset level across the High Current Yield classification again shows both lower overall outflow rates during the market stress of Q4'2008 and also more homogeneous outflow patterns across different fund groupings, as compared to the Short Investment Grade and Intermediate Investment Grade classifications. This homogeneity may be explained by the lesser use of such funds by institutions with short-term liquidity needs and the higher number of smaller individual shareholder accounts within High Yield funds.



Source: Strategic Insight Simfund MF / Lipper (Classifications)

In contrast to the Short and Intermediate Investment Grade Bond categories, the period of intense market turbulence during October 2008 did not trigger the same type of dislocation in redemption rate patterns across different asset levels among High Current Yield funds.

While the median outflow rates across each asset level charted above did peak during October, the relationship between the outflow rates of different asset size peer groups remained consistent in the face of extreme market conditions. Unlike for the investment grade categories, the largest High Current Yield funds did not exhibit a significant spike in relative outflow rate patterns versus their smaller peers. In fact, during October'08 the median High Current Yield fund with assets of over $1 billion experienced an outflow rate 0.7% *below* that of the median fund with $100 to $250 million in assets – and a relatively similar pattern prevailed throughout the rest of Q4'08.

In Closing: Mutual Funds and Systemic Risk

Throughout this report we have observed that stock and bond mutual funds, which are held primarily by individual investors, exhibit a reassuring pattern of redemption activity – modest in magnitude and short-term in duration -- even during the most extreme environment of financial and economic stress. Funds with a high proportion of institutional investors and much larger accounts may have a modestly higher attrition patterns at times, but largely behave similarly to retail-owned funds.

These consistent patterns, over 30+ years, exhibited among tens of millions of fund investors, suggest that the FSOC speculation on massive, harmonized 'run on the fund' may be based on a banking framework that has no application to the mutual fund marketplace.

To repeat our conclusions:

- Large stock and bond mutual funds have relationships with hundreds of thousands of investors (or more), each with their own unique circumstances. On average such investors each own just $20,000-$30,000 in a particular fund (stock funds) or a bit higher balance, on average, in bond funds. Large mutual fund management companies each have relationships with millions of investors who have never acted in a herd-like manner as implied by FSOC concerns, throughout the many crises of the past 50 years.

- We suggest that the G-SIFI conversations should focus on the fact that, among the largest mutual funds, ownership is extraordinarily diverse – across millions of investors at hundreds of platforms. Thus, very large mutual funds are inherently stable, and would not experience massive net redemptions even during times of financial stress and heightened investor anxiety. **And if none of their funds are a source of systemic risk, then the fund manager (independent of their aggregated asset under management) is similarly not a source of systemic risks and should not be considered G-SIFI.**

- **It is not surprising that the mutual fund industry never experienced the harmonized and sizeable redemption behavior associated with the "Herding" theory and its implied systemic risk. The heterogeneous nature of mutual fund investors; the dominant and further rising share of mutual funds invested through buy-and-hold asset allocation programs; the reality that the great majority of fund investments are targeted for retirement savings with 30-50 year horizons for accumulation and distribution; and the transition of traders and market timers (institutions and individuals) out of mutual funds and into ETFs, all suggest that large stock and bond mutual funds are unlikely to pose systemic risks.**

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