

HOW  
MUTUAL FUND  
OWNERSHIP & DISTRIBUTION  
ARE CHANGING – AND  
WHAT THAT MEANS FOR  
**FUND PERFORMANCE**



ReThink@ReFlow

A publication of  
**ReThink@ReFlow**

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**At ReFlow,** *we have observed that the patterns of mutual fund ownership and distribution are markedly in flux, due to shifting demographics, investor preferences, and distribution channels.*

*Meanwhile, mutual fund asset flows are becoming more volatile, steadily undermining fund performance by raising expenses and distorting investment strategies.*

### **Are these trends connected?**

*Our analysis suggests that they are, and that going forward, fund managers may be in for an even bumpier ride.*

## KEY FINDINGS

### **The volatility of asset flows has been rising**

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Monthly gross flows, which previously hovered between 4% and 5% of AUM, topped 9% at the height of the recent market volatility.

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Contrary to perception, rising asset flows do not appear to be a temporary or cyclical phenomenon. Monthly flows began rising in 2006, well before the market meltdown in 2008. In every year over the past decade, more than half of all funds have experienced negative net quarterly flows at some point during the year.

### **The performance impacts of flow-driven trading are substantial**

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Both redemptions and subscriptions may undercut fund performance by driving fund managers to make trades and go to market under conditions they would not otherwise choose. This flow-driven trading distorts investment strategies, imposes transaction costs, distracts portfolio managers and traders from carrying out investment strategies, and generates unwanted capital gains distributions.

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Flow-driven trades are more costly than other transactions. Research studies have found that each dollar of strategy-driven trading increases

portfolio value by an estimated \$0.71, on average; in contrast, each dollar of flow-driven trading costs lowers fund returns by \$0.86.

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Flow-driven trading is not an insignificant cost factor, since it has been estimated to account for 30% to 40% of all trading. Studies show aggregated trading costs to be even higher than expenses for the average fund.

### **Distribution and demographic trends point to worsening flow volatility ahead**

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Investors increasingly buy and sell mutual funds through retirement plans, independent advisers, and other intermediaries. This fundamental shift away from direct mutual fund investment increases asset flows because decision-making, which was formerly fragmented among millions of individual investors, is now concentrated in the hands of a smaller number of professionals who control large amounts of assets. Moreover, these intermediaries add value by continually changing and fine-tuning asset allocation with shifting market conditions.

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Market volatility and the widespread availability of investment information have encouraged investors to shift assets from one fund or asset class to another.

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The growing dominance of no-load funds, which have accounted for 86% of new asset flows into mutual funds over the last 10 years, means investors can switch funds at no cost. Fewer investors are using a “buy and hold” strategy, as evidenced by steadily dropping average holding periods for mutual funds.

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Baby Boomers, who invest in mutual funds at higher rate than other age groups, are reaching retirement in growing numbers. In the next 40 years, the number of Americans aged 65 and older is expected to more than double.

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A rising tide of retirees will mean even more rapid growth in mutual fund withdrawals in general, and retirement plan withdrawals and rollovers in particular.

### **Flow volatility is increasing across major distribution channels**

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#### **Defined-contribution retirement plans**

As public policy has shifted responsibility for retirement investing to the individual, DC plan assets have increased dramatically, as has the share of assets held in mutual funds. Asset flows naturally increase with the growth of DC plans, which are generally funded through regular paycheck withdrawals, require withdrawal and rollover of assets

when employees leave or change jobs, and entail systematic or lump-sum withdrawals after retirement.

### **RIAs and other fee-only advisers**

Registered Investment Advisers (RIAs) have achieved enormous growth and success by meeting investors' burgeoning demand for independent advice. Between 2003 and 2007, RIAs quadrupled the share of mutual fund assets they control. Because RIAs add value by continually adapting clients' asset allocation and switching them in and out of funds at net asset value, their growing influence translates into rising asset flows. Their success is also leading other intermediaries to adopt the same fee-only model.

### **Wealth management platforms**

One of the most important developments in fund distribution has been the rise of wealth management platforms to which many traditional brokerage firms have been migrating. Applying institutional-level resources to manage assets of many individuals, platforms produce "lumpy" asset flows because they centralize decision-making on asset allocation and fund selection; one platform gatekeeper's decision can move assets of thousands of investors. Platforms are also "packaging-neutral" with no ties to particular mutual fund families or to mutual funds in general. As platforms continue to grow, they will only exacerbate the volatility of asset flows.

*In the past, the industry has devoted relatively little attention to asset flows, their performance impacts, or their linkage with changing fund distribution patterns. But with the rising volatility of asset flows and the growing pressure to improve fund performance, mutual fund managers should:*

- > **BECOME MORE AWARE** of how significantly asset flows can damage performance.
- > **REALIZE** that asset flows have grown more volatile, and that this trend is likely to persist and worsen based on fundamental shifts in fund distribution as well as demographic factors.
- > **GET READY** for more scrutiny by regulators; European regulators already require fund managers to adopt actions mitigating performance dilution due to trading.
- > **EXPECT TRADING COSTS** to become a factor in fund evaluation by intermediaries and investors; Morningstar has already announced that it will release such a metric later this year.
- > **CONSIDER PROACTIVE MEASURES** to analyze their flow-driven trading and examine how their distribution strategies and product mix may be increasing asset flows.
- > **EXPLORE STRATEGIES** for managing and mitigating the performance impacts of shareholder flow.



THE MUTUAL FUND INDUSTRY has long tracked basic trends in fund growth and distribution, which tell a dramatic story of economic progress and industry success. According to the Investment Company Institute, the percentage of households owning mutual funds rose from less than 6% in 1980 to 45% in 2008, the highest percentage to date. Individuals presently own 82% of mutual fund assets (whether directly or through retirement funds), and mutual funds remain the primary savings and investment vehicle in the U.S.

Yet most ongoing industry research has not delved into the forces that appear to be significantly altering the ways that mutual funds are bought and sold, nor has there been much discussion of the repercussions in terms of shareholder flow.

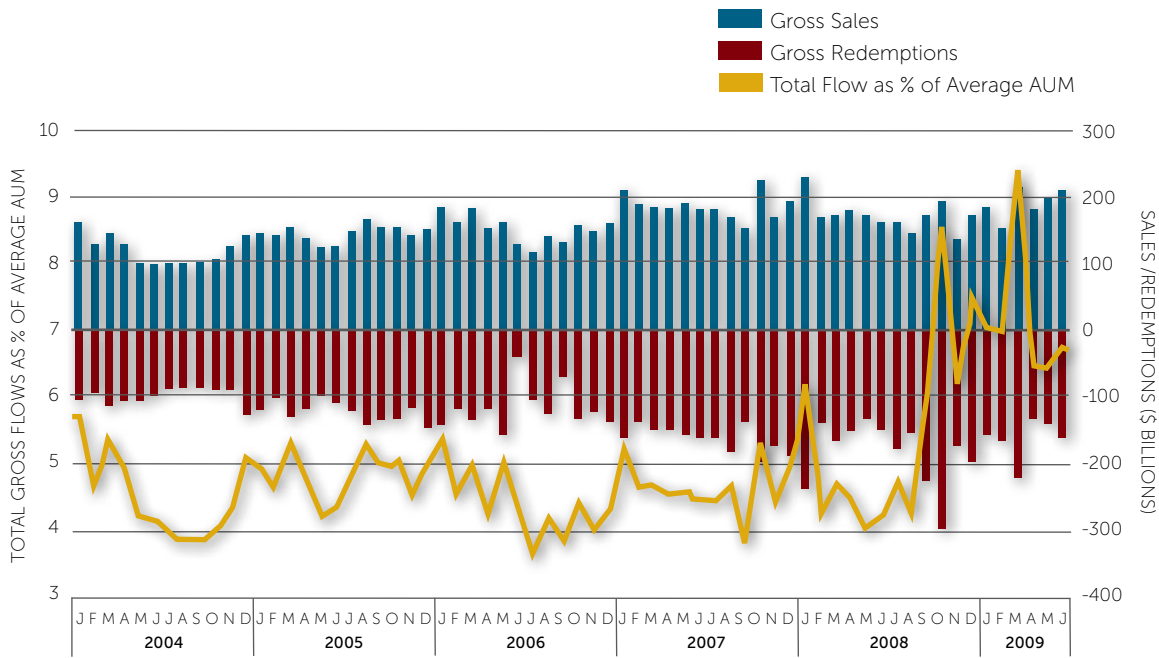
THIS WHITEPAPER examines the linkage between these two shifting trends, as well as the challenges they raise for fund managers

## **THE TREND: FLOWS GETTING “LUMPIER”**

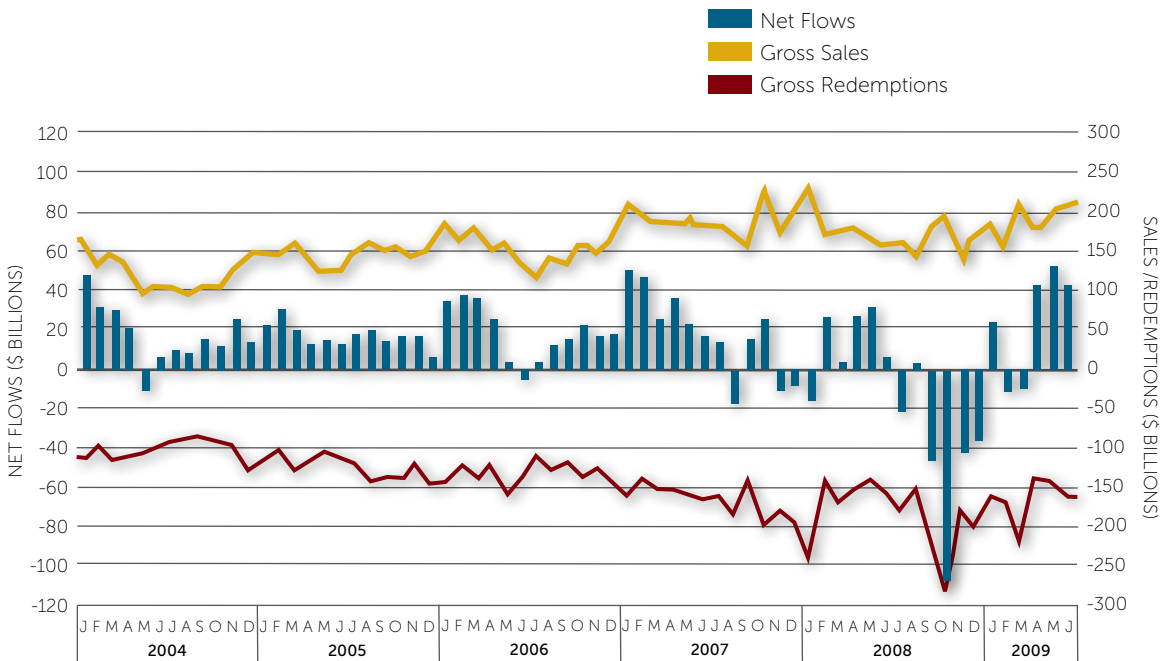
For years mutual fund managers have accepted the constant ebb and flow of subscriptions and redemptions as a fundamental, if sometimes annoying, fact of life in the industry. The past decade saw events that significantly affected asset flows in 2004, 2006, and 2008. Still, except for a brief flurry of attention dealing with market-timing and late-trading scandals earlier in the decade, until recently the industry has largely ignored or overlooked issues concerning shareholder flow.

The issue has had a relatively low profile for several reasons. First, detailed, industry-level flow data were unavailable until 2001; before that, industry groups gathered little or no data on asset flows. At the same time, mutual funds as a group have enjoyed positive net flows through much of the industry's history. Shareholder flows have not been a hot button for fund executives, who have been focused on market growth and volatility. Except for the early '90s, when inflows shot up markedly, the industry's monthly gross flows typically hovered in a range equivalent to 4% to 5% of average AUM until the middle of this decade (**Figure 1**).

It is true that in 2008 the industry registered its first annual net outflow in 20 years. But annual data don't reflect the volatility in monthly flows, which began creeping up in 2006, well before the market meltdown (**Figure 2**). Nor do the averages reflect the experience of individual funds, many of which have been hit by net outflows periodically. In fact, the percentage of funds experiencing negative net quarterly flows has exceeded 50% at some point during every year over the past decade, according to Strategic Insight data.



**Figure 1**  
**Gross flows as a percentage of average AUM**  
 Long-term, open-end funds only as of July 30, 2009 (ETFs and affiliated funds of funds excluded)  
 Sources: NSAR, Strategic Insight, ICI, ReFlow Analysis



**Figure 2**  
**Monthly gross sales and redemptions vs. net flows**  
 Long-term, open-end funds only as of July 30, 2009 (ETFs and affiliated funds of funds excluded)  
 Sources: NSAR, Strategic Insight, ICI, ReFlow Analysis

The perception that asset flows have been a relatively modest, if constant factor in fund economics can also be turned around. When viewed in light of their impacts on fund costs and operations, shareholder flows emerge as a corrosive force steadily chipping away at fund returns and assets while generating unwanted capital gains distributions—and this is true for large inflows as well as outflows, counterintuitive as that may seem.

While most mutual funds have had direct experience with volatile asset flows, fund executives may assume that these are an outgrowth of the 2008 market meltdown and its aftermath. Our analysis suggests that this is not the case. Rather, the trend toward more volatile flows appears to be the result of more fundamental, longer-term forces. In short, flow volatility is an ongoing trend that may not reverse even as the economy recovers and markets stabilize.

## **THE PROBLEM: HOW SHAREHOLDER FLOW UNDERCUTS PERFORMANCE**

*Not all trading is equal—and flow-driven trading is especially costly.*

Because liquidity is a primary feature of mutual funds, the constant in- and outflow of shareholder assets is built into the structure of the industry. At the same time, mutual funds are designed to produce returns through long-term investment strategies. Therein lies a fundamental conflict—and one that takes a significant but largely hidden toll on fund performance.

The most obvious dilemma arises when funds are hit with higher-than-expected redemptions or subscriptions. When funds find themselves squeezed for cash to meet redemptions, the simplest and most accessible solution is to liquidate securities. Large inflows due to a wave of subscriptions or wealth management platform allocations can also be problematic. Portfolio managers typically want to avoid moving markets and incurring market impact by investing assets too quickly. They may also need time to put large allocations to work in accord with their strategies. Holding excess cash in the interim can result in unacceptably high tracking error and drag on performance. It also runs counter to the philosophy of funds that believe in being fully invested. The same issues arise when funds stockpile cash as a cushion against future redemptions.

This is not to say trading is inherently negative; in fact, it is integral to the mutual fund investment process. But not all trading is equal—and the kind of trading that is driven by shareholder redemptions or subscriptions can be especially costly on a number of counts:

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**Distorting investment strategies** When funds sell securities to raise cash—especially securities they would otherwise prefer to keep—shareholders are in effect dictating investment decisions. The same is true when large inflows spark a flurry of buying in order to avoid excessive cash and tracking error.

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**Distracting portfolio managers and traders** Flow-driven trades divert time and attention from the ongoing job of carrying out investment strategies and finding new opportunities.

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**Incurring transaction costs** When portfolio managers trade to implement investment strategies, it helps funds add investment value. On the other hand, trades driven by shareholder flow not only fail to add value, but are a drag on performance. Researchers have found that each dollar of discretionary trading costs raises portfolio return by an estimated \$0.71, on average, while each dollar of flow-driven trading costs lowers fund returns by \$0.86.<sup>1</sup>

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**Forcing bad timing** Transactions driven by short-term liquidity needs can be especially costly when they force fund managers to trade on days of severe decline, volatility, or disruption.

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**Creating investor tax liabilities** Flow-driven selling of securities can result in unwanted capital gains distributions that leave shareholders with large tax bills.

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**Complicating the management of cash positions** Funds experiencing volatile flows may find themselves holding more cash than is desirable, whether that results from unexpectedly large inflows or from hoarding cash as a cushion against future redemptions.

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**Draining fund performance** The costs of flow-driven trading are hardly insignificant, as these transactions have been estimated to account for 30% to 40% of all mutual fund trading. Research also shows that trading costs tend to be even higher than fund expenses. Aggregated trading costs of funds studied averaged 1.44%, compared to the average expense ratio of 1.19%.<sup>2</sup>

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When the dynamics of flow-driven trading are fully taken into account, it emerges as an issue mutual funds can't afford to ignore. That's especially true in a climate in which returns are harder to come by and every increment of performance counts.

## **PROGNOSIS: EVEN GREATER FLOW VOLATILITY**

Awareness of asset flows and their impacts has risen with the huge spike in redemptions in late 2008, followed by near-record inflows in the second quarter of 2009. The circumstances of these recent trends should not, however, be taken to mean that flow volatility is a temporary or cyclical phenomenon.

Analysis of fund ownership patterns, distribution dynamics, demographic shifts, and investor behavior trends points to the opposite conclusion. When these dots are connected, it appears that the volatility of asset flows is not only a fundamental problem for the mutual fund industry, but is also likely to worsen in the years ahead.

*The problem of volatile asset flows is neither temporary nor cyclical.*

<sup>1</sup> Edelen, Evans, Kadlec: *Mutual Fund Trading and Performance: Scale, Flow, and Agency Factors*, December 2006.

<sup>2</sup> *Ibid.*

## The Move Toward Intermediation

A driving factor in changing fund ownership and distribution patterns is the long-term, fundamental shift from direct to intermediated mutual fund investment, whether through retirement plans or financial advisers. As one indicator of the trend, the share of investors who buy mutual funds through defined contribution retirement plans increased from just 8% in 1990

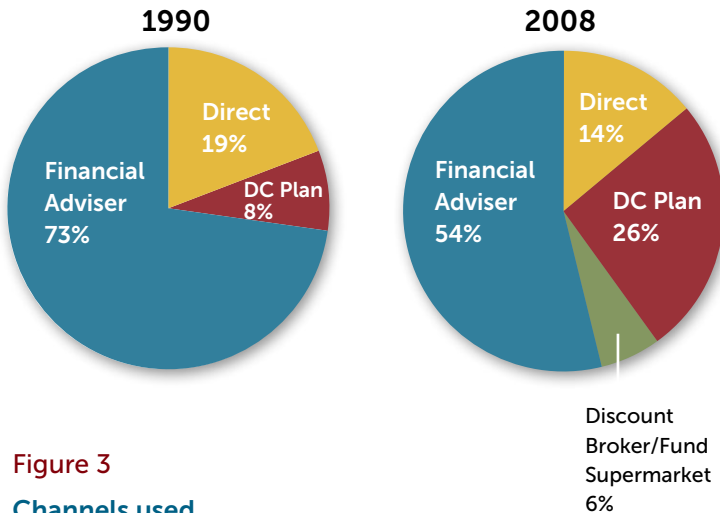
to 26% in 2008 (Figure 3). Similarly, according to Investment Company Institute data, the percentage of U.S. households making their first purchase of a mutual fund through an employer-sponsored retirement plan has risen from 53% to 68% over the past two decades.

A set of 2008 findings from the Investment Company Institute clearly shows the level of intermediation that exists in the mutual fund industry today. When asked to identify their primary mutual fund purchase channel, only 13% of investors responded that they mainly bought directly from mutual fund companies or

through a discount brokerage; 51% invested mainly through an employer-sponsored retirement plan and 36% most often purchased shares through a financial adviser or other intermediary.

Given the growing complexity of financial products, it is not surprising that investors have become increasingly reliant on professional financial advice. Nearly three out of four mutual fund investors said they had consulted a professional financial adviser before their most recent fund purchase.

It is also not difficult to see why a higher level of intermediation goes hand-in-glove with rising velocity of asset flows. Investment decision-making formerly was fragmented among millions of individual investors. Greater concentration of assets in the hands of registered investment advisers, retirement plans, and wealth management platforms means that decision-making is concentrated in fewer hands. Each decision by an investment professional influences the assets of anywhere from a few dozen to hundreds of thousands or even millions of investors. Thus, the trend toward intermediation naturally results in larger-scale movements of assets.



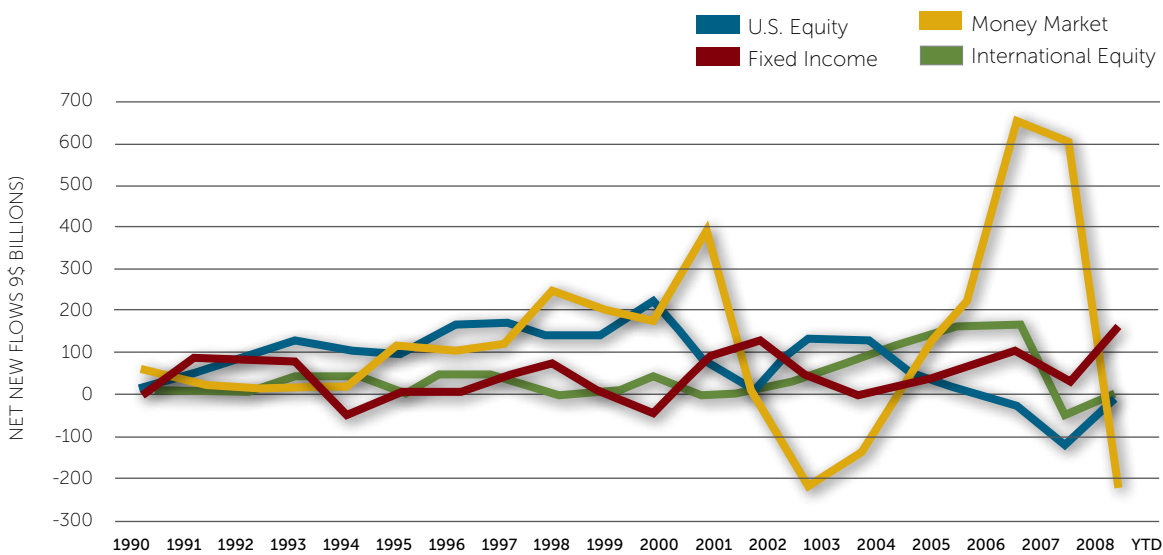
**Figure 3**  
Channels used to purchase mutual funds

Sources: Investment Company Institute, Cerulli Associates, ReFlow Analysis

## Rising Propensity to Shift

Several other factors have also generally encouraged more shifting of assets from one fund or asset class to another, including:

**Increased market volatility** — which has driven investors to seek safer or better-performing investments. The pattern of net new fund flows clearly reflects investors' shifts to or from domestic equity, international equity, fixed income and money market funds over the past decade (Figure 4).



**Figure 4**  
Annual net new flows by fund type

Sources:  
Strategic Insight,  
ReFlow Analysis

**Growing emphasis on financial planning and asset allocation** — which is one of the primary means by which intermediaries and financial advisers add value to investor portfolios. Thus, advisers have strong incentives to shift assets into higher-performing investments as opportunities arise.

**The growing dominance of no-load funds** — which have accounted for 86% of new asset flows into mutual funds over the last 10 years. An estimated 80% of A-share funds are now being sold at net asset value, according to Financial Research Corporation. The broad availability of funds with no initial sales charge removes a major barrier to switching of investments.

**The free flow of up-to-the-minute information on mutual funds and other investment alternatives** — thanks to an explosion of coverage online as well as in print and broadcast media. Today any investor with broadband can explore investment options, review performance data, and access sophisticated analyses that were once available only to industry professionals.

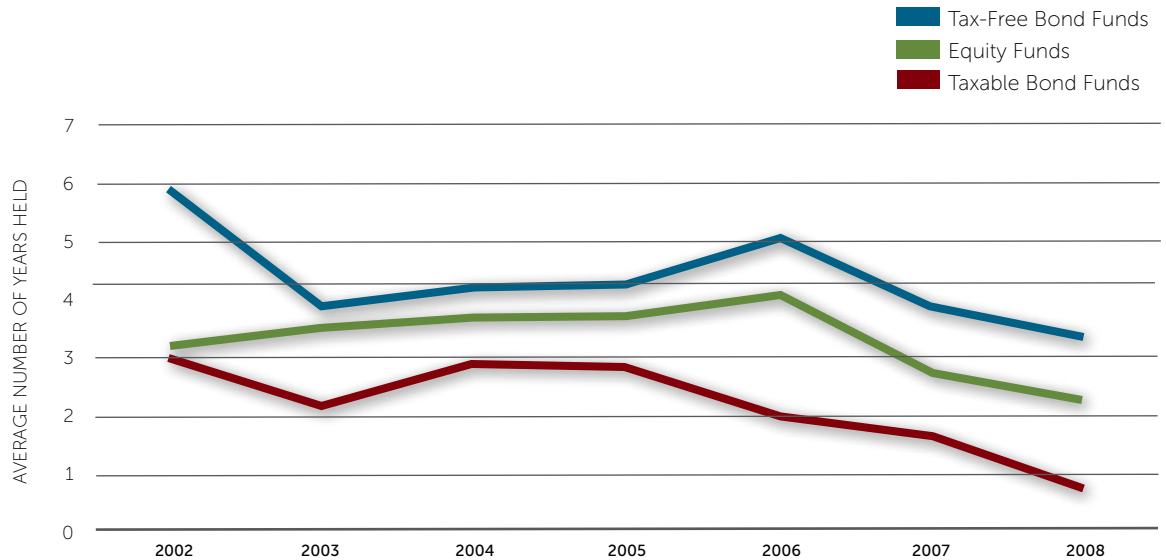
As a result, investors are increasingly less inclined to pursue a “buy and hold” strategy, as evidenced by the steadily dropping average holding period for mutual funds (Figure 5).

**Figure 5**

**Average holding period\* of mutual funds**

\*Average holding period = 1/(Total annual redemptions/Average AUM)

Sources: Strategic Insight, ReFlow Analysis



**The Coming Retirement Wave**

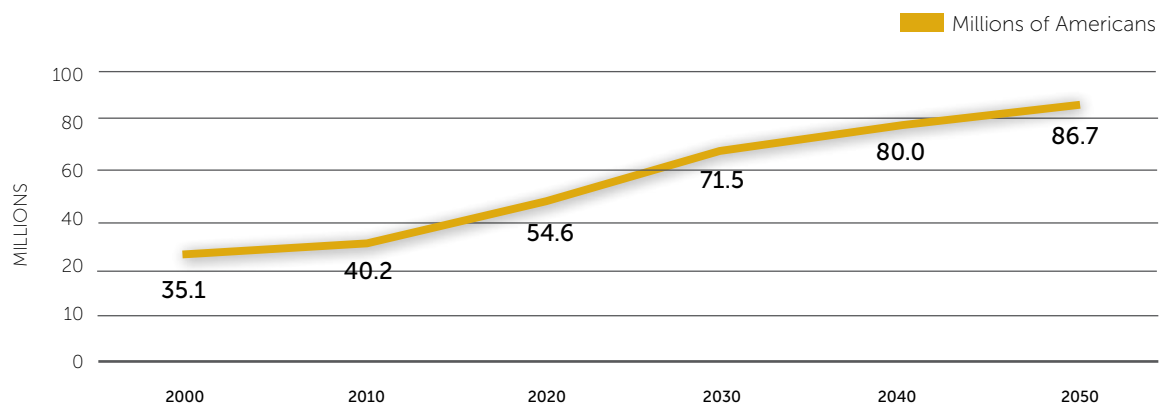
Demographic factors will swell the future impacts of changing fund distribution on asset flows. As those in the huge Baby Boom population cohort reach retirement age, the volatility of mutual fund asset flows can only be expected to increase. Not only do Baby Boomers dominate in terms of sheer numbers, the households they head also invest in mutual funds at a higher rate than those in other groups. Mutual funds are owned by 56% of those aged 45 to 54 and more than half of those in the 55-to-64 age group, versus about a third of those under 35 or over 65, according to U.S. Census Bureau data.

Looking ahead, the U.S. Census Bureau predicts that the number of Americans aged 65 and older will more than double in the next 40 years (Figure 6). The mutual fund industry can expect to feel the impacts of this rising tide of retirees across all distribution channels, but the effects will likely be most pronounced in the 401(k) /DC plan channel, the largest and most rapidly growing of them all.

**Figure 6**

**Americans 65 years or older**

Sources: U.S. Census Bureau, ReFlow Analysis



## SCOPE OF THE TREND

The pattern of heightened flow volatility is not a limited or selective phenomenon, but is playing out across the largest and fastest-growing channels for mutual fund flows.

### Defined-Contribution Retirement Plans

One of the most important public policy developments of the last 20 years has been the shift in responsibility for retirement investing from the public sector to the individual. This has brought a rising tide of assets into 401(k) and other defined-contribution (DC) plans, to the point where nearly half of all mutual fund assets are now held in retirement plans, according to the ICI. Assets of 401(k) plans, which account for a majority of all retirement plans, have increased tenfold over the past two decades and now exceed \$2.2 trillion (Figure 7).

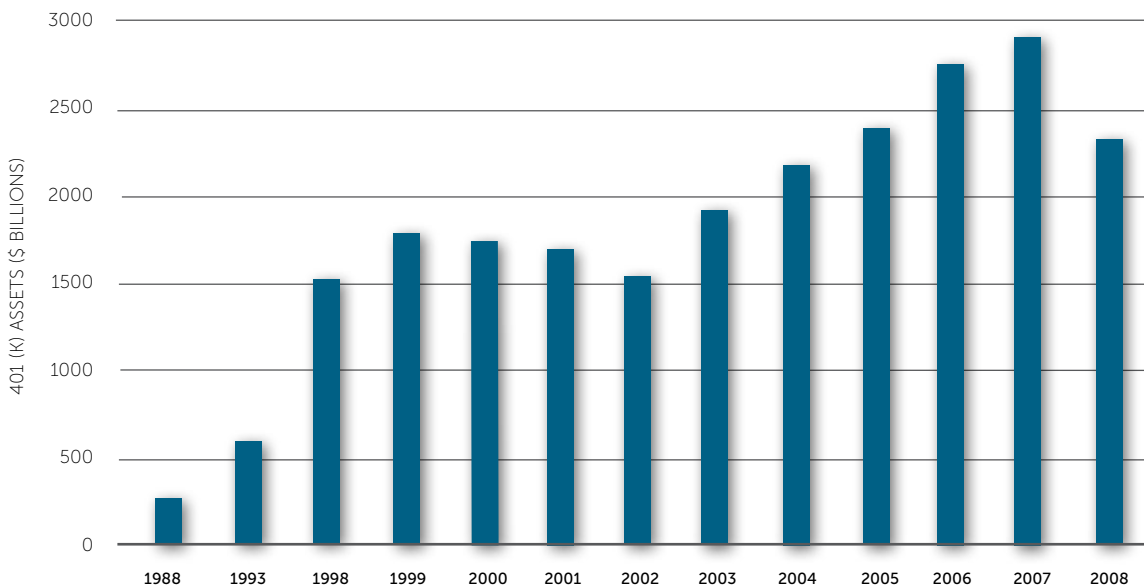


Figure 7

#### 401(k) assets

Sources: Federal Reserve Board, Retirements Research Inc., ReFlow Analysis

At the same time, mutual funds have become an increasingly dominant vehicle for retirement investing. Between 2003 and 2008, the share of DC plan assets held in mutual funds ranged from 44% to 51%—a big jump from the 37% share mutual funds had in 1998.

The growth of retirement plans has contributed significantly to rising asset flows for several reasons:

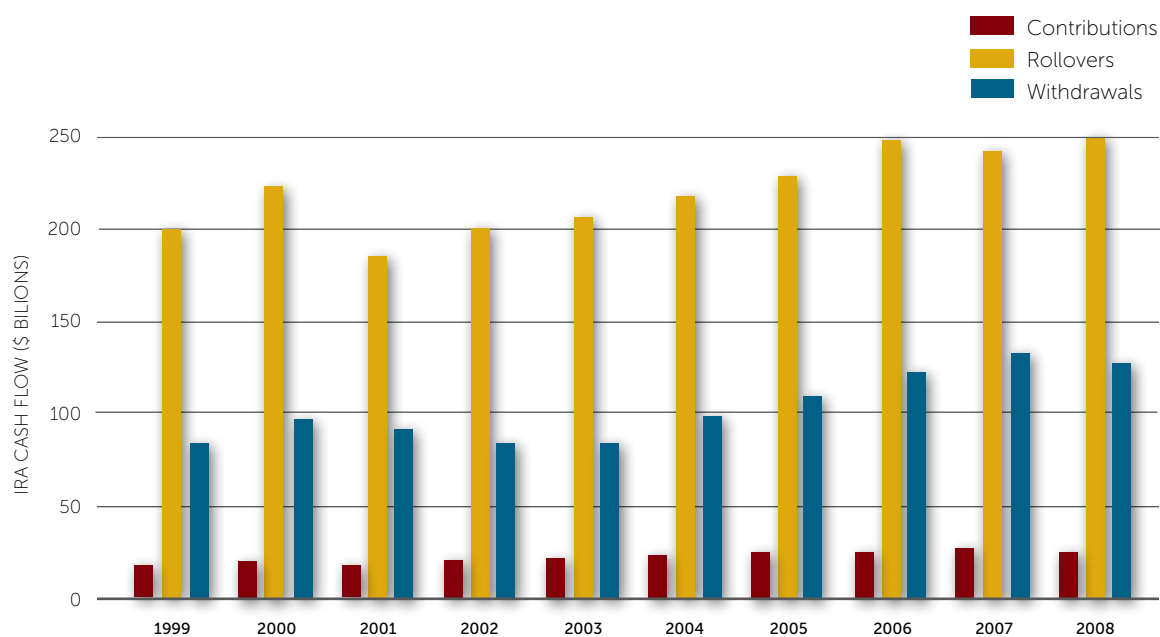
Many plans are funded primarily through regular employee paycheck deductions, producing a continual stream of inflows.

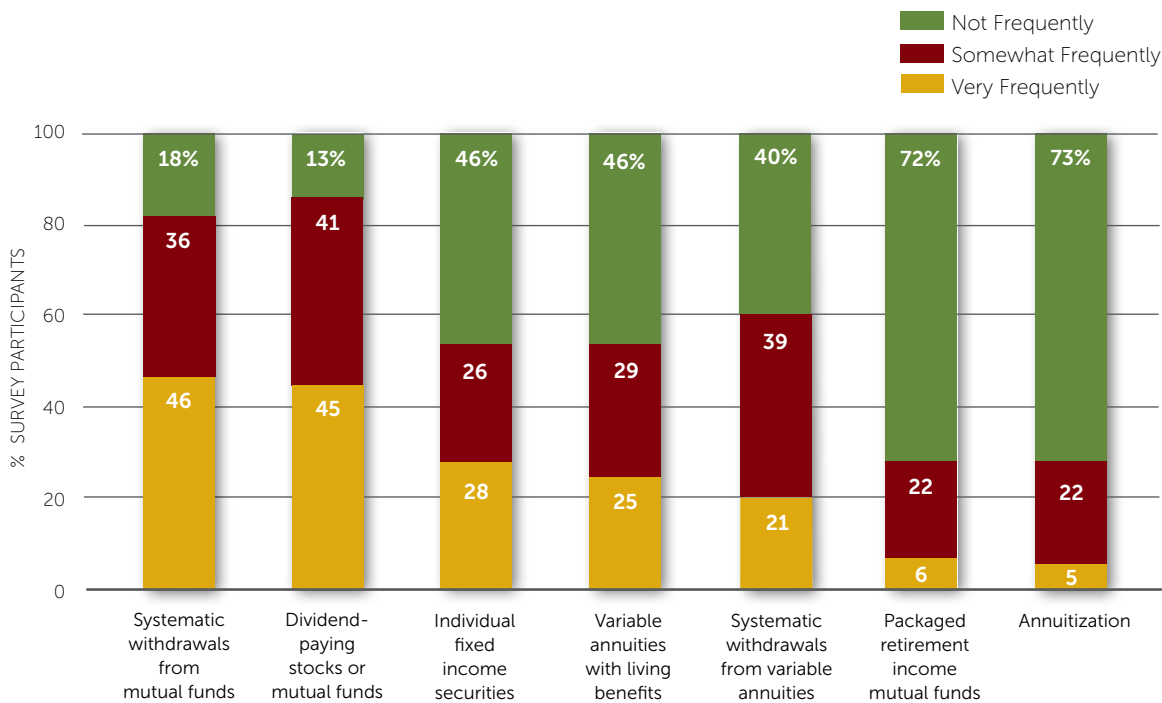
When employees leave or change jobs, they typically withdraw the balance in their DC plan account and rollover the assets into a new plan or some other retirement vehicle. Rollovers into Individual Retirement Accounts (IRAs), for example, have been on the upswing (**Figure 8**).

Withdrawals from DC plan or other mutual fund investments are the most popular method of funding retirement. In a 2007 Cerulli Associates study, investment advisers reported “systematic mutual fund withdrawals” as their most frequently used strategy for generating retirement income (**Figure 9**). What’s more, a recent ICI survey of DC plan participants found that 54% expect to withdraw their proceeds in a lump sum upon retirement.

**Figure 8**  
**Annual IRA cash flows**

Sources: ICI, Federal Reserve Board, Retirement Research Inc., ReFlow Analysis





**Figure 9**  
Retirement income strategies: frequency of usage by advisers

Sources: Financial Planning Association, Cerulli Associates, ReFlow Analysis

## RIAs and Other Fee-Only Advisers

Over the past decade, market volatility and complexity have greatly fueled the demand for professional advice—and, more specifically, independent advice—on financial planning and asset allocation. This trend has been spearheaded by registered investment advisers (RIAs), who have vastly increased their presence and influence during the years of market upheaval.

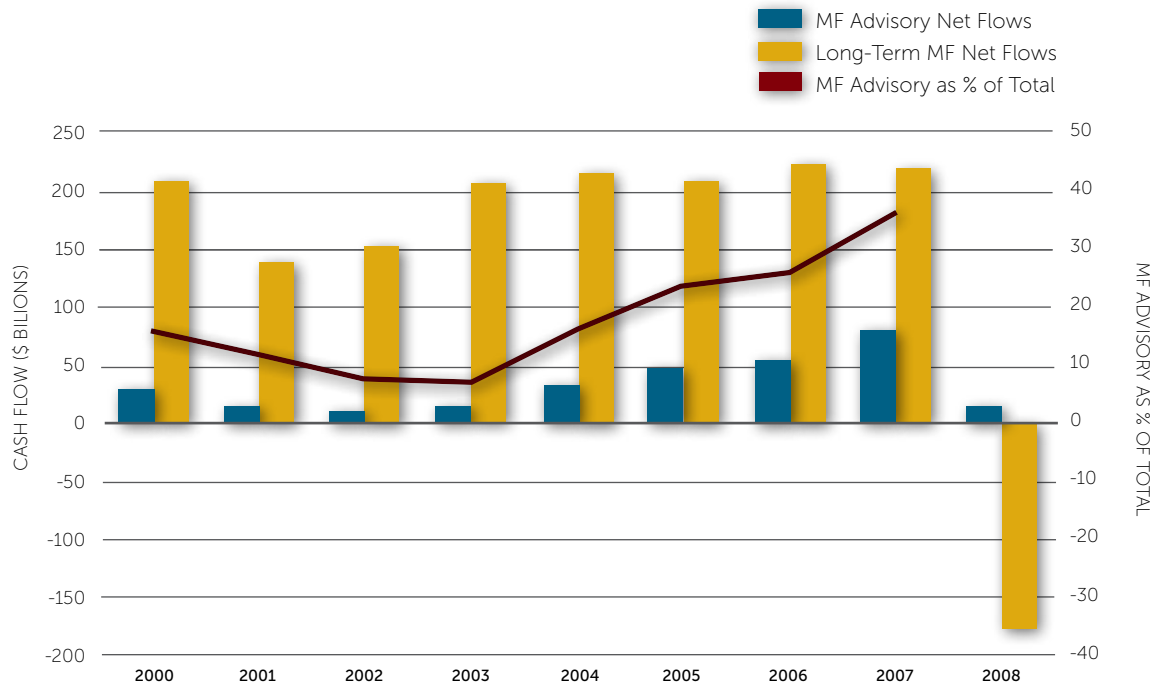
Up until a decade ago, the ranks of advice-givers were dominated by wirehouse brokers who steered investors to proprietary mutual funds, often those with sales loads. In the years since, RIAs have grown dramatically in number; they have also captured increasing market share, quadrupling their percentage of mutual fund asset flows between 2003 and 2007 (Figure 10). By 2008, RIAs outnumbered wirehouse reps by more than two-to-one (Figure 11). Based on the success of RIAs, other intermediaries, regardless of where they are housed, have increasingly adopted a fee-for-advice model relying on no-load funds.

RIAs and other fee-only advisers have proved their ability to add portfolio value by personalizing investors' asset allocation and making timely shifts with changing market conditions. The prevalence of no-load mutual funds has allowed independent advisers to continually adapt and fine-tune each client's investment mix with no switching charges. Thus, escalating asset flows are one outgrowth of independent advisers' expanding influence.

*Continually adapting each client's investment mix is one of the ways fee-only advisers add value.*

**Figure 10**  
**Mutual fund advisory flows**

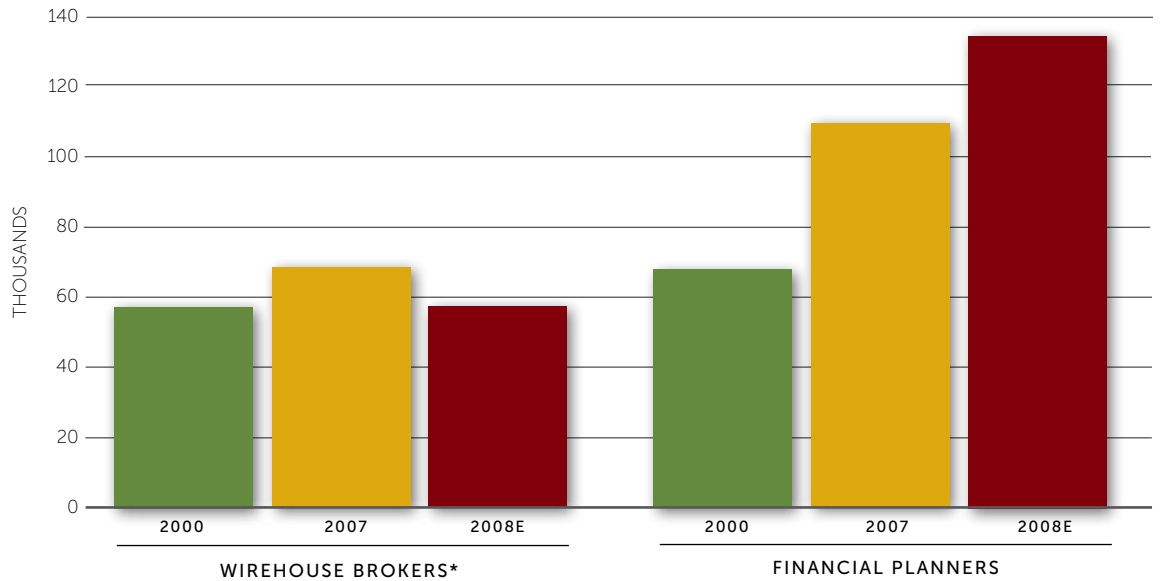
Sources: NSAR, ReFlow Analysis



**Figure 11**  
**Number of wirehouse brokers\* and financial planners**

\*Includes financial brokers at Merrill Lynch, Smith Barney, Wachovia, Morgan Stanley and UBS

Sources: Corporate Reports, Financial Planning, Empirical Research Partners Estimates, ReFlow Analysis



## Wealth Management Platforms

One of the key trends in the move toward packaged investment advice and products has been the rise of wealth management platforms which bring institutional-level resources and centralized decision-making to bear on the combined assets of thousands of investors. Many wirehouses and traditional brokers have migrated to the platform model in recent years. According to a recent analysis by T. Rowe Price, by 2010 platform gatekeepers will make an estimated 35% of fund selection decisions for accounts housed with wirehouses and traditional brokers and influence another 40% of decisions by providing advisers with fund selection lists or asset allocation models.<sup>3</sup>

*A single gatekeeper's decision can move thousands of accounts.*

The upshot has been a shift in power toward platform gatekeepers and due diligence teams, which control an increasing share of fund flows as well as asset allocation and fund selection decisions. Platform gatekeepers not only hire and fire asset managers based on stringent selection and performance criteria, but also review product lines, cherry-pick funds rather than selecting fund families, and continuously monitor and review manager performance (Figure 12). Platform due diligence teams also help oversee asset allocation programs, such as funds of funds, mutual fund wraps, and Unified Managed Accounts (UMAs).



<sup>3</sup> Ruppert, R. Todd, *Status of the US Fund Industry*, Sept 23, 2009 presentation to the Annual ALFI & NICSAs Global Investment Funds Forum

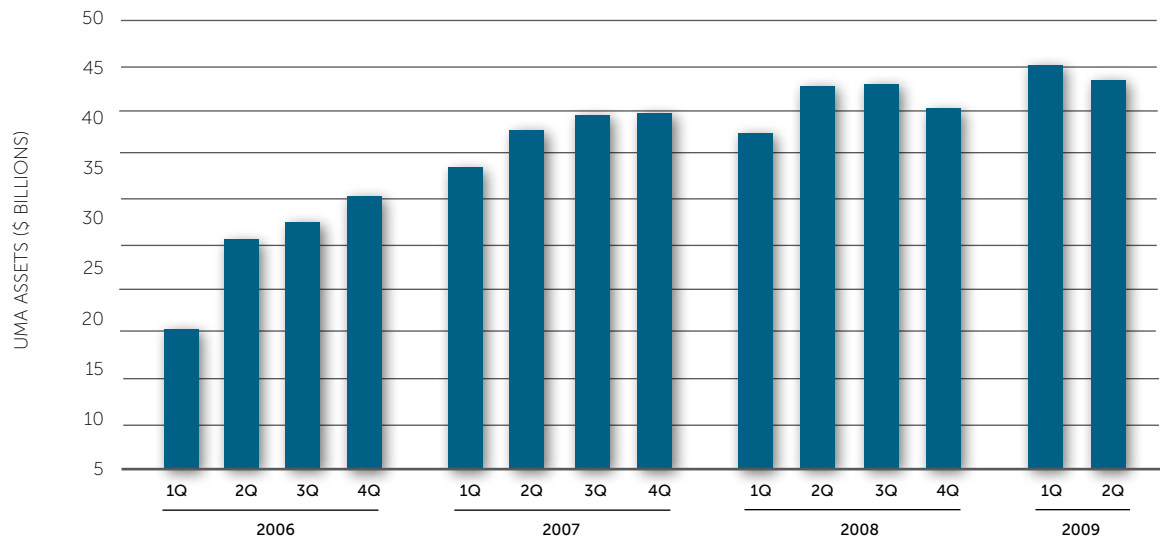
As a result, it is estimated that platform fund selection units today influence anywhere from one-fifth to one-half of all mutual fund sales. Although industry data currently does not provide a hard-and-fast measure of the total scope of the evolving platformization trend, the rising level of investment in UMAs is one indicator (Figure 13).

Platforms vary in terms of structure and features (which is one reason why it is difficult to quantify their growth precisely). They range from formal structures with a centralized, fully articulated investment process to more informal varieties, such as RIA-driven buying and selling of investments via a mutual fund “supermarket.”

What platforms have in common is the tendency to produce “lumpy” asset flows; a single gatekeeper’s decision can move thousands of accounts. What’s more, platforms are “packaging-neutral” with no ties or loyalty to any particular fund families or to mutual funds in general. To the extent that platforms continue to grow and proliferate, they can only exacerbate the volatility of asset flows.

**Figure 13**  
**Unified Managed Account (UMA) assets**

Sources: MMI, Dover Financial Research, ReFlow Analysis



MUTUAL FUNDS CONTINUE to be the dominant investment and savings vehicle in the U.S., and the industry's competitive position remains strong. At the same time, the industry faces challenges that could undercut its performance and growth. Specifically, in the wake of the market's upheaval the industry is growing more aware of asset flows and their deleterious impacts, including distortion of portfolio strategies, direct and indirect transaction costs, and added demands on portfolio managers and traders.

Relatively little attention, however, has been focused on the dynamics of asset flows as they relate to changing patterns of mutual fund ownership and distribution. When these trends are connected, they strongly suggest that volatile asset flows are not temporary or cyclical, but have become a permanent aspect of the mutual fund business with broad implications. In fact, while mutual funds are the investment industry sector most obviously challenged by volatile asset flows, their performance impacts are also an emerging concern for other pooled investment vehicles, including hedge funds.



## CONCLUSION | RECOMMENDATIONS

### More Volatility Ahead

The volatility of asset flows can only be expected to increase, perhaps significantly, in the future, based on demographic projections and other factors underlying fund distribution trends.

### Heightened Regulatory Scrutiny

As awareness of the issue grows, fund managers can expect it to be the subject of greater scrutiny and discussion by regulators. European regulators already require fund managers to adopt “swing pricing” or other measures to shield investors from “dilution” of returns due to flow-driven trading, among other factors. U.S. regulators may well look to Europe’s example as they explore broader proposals for heightened regulation of the industry. (For more on this topic, please see *Expanding the Anti-Dilution Toolkit: New Solutions for UCITS* at [www.reflow.com/rethink](http://www.reflow.com/rethink).)

### A Factor in Fund Evaluation

In the U.S., the performance impacts of asset flows are beginning to come into the purview of investment professionals who monitor and evaluate mutual funds. ReFlow has been researching a methodology that will allow the peer ranking of funds according to their estimated costs of trading, including flow-driven transactions, based on publicly available data. We are also working with other organizations interested in application of this ReFlow Transaction Cost Analysis Metric.

## A Push for Proactive Measures

In the current market climate, mutual fund managers are already under pressure to achieve incremental improvements in returns. It behooves them to take action aimed at better understanding and mitigating the performance impacts of asset flows.

For example, managers should consider steps to:

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Analyze how their distribution strategy may be affecting asset flows.

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Track their flow-driven trading and estimate its impacts on return.

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Consider sensitivity to asset flows in reviewing their current product lineups and proposed new products. For example, funds of funds, asset allocation funds, and other outcome-oriented products may be more likely to generate flow-driven trading.

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Explore strategies for managing and mitigating the performance impacts of shareholder flow. These may include:

- > *Revising targeted cash levels and other cash management policies*
  - > *Establishing additional procedures for flow-driven trading*
  - > *Surveying alternative liquidity sources*
  - > *Working with solutions providers such as ReFlow*
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## ABOUT REFLOW

REFLOW provides 1940 Act mutual funds and UCITS with the tools to improve performance by managing the impacts and volatility of shareholder flow. As of October, 2009, our toolkit has been approved by the boards of 22 mutual fund families, representing more than \$372 billion in assets, for use by 467 funds. We offer two solutions which can be used separately or in combination:

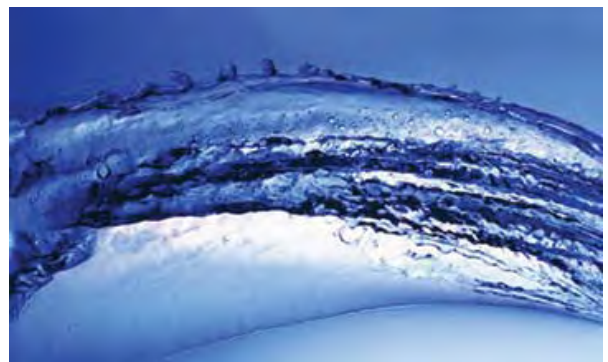
**Redemption Service (RS)** gives funds continuous, everyday access to liquidity they can draw upon to meet redemptions and manage cash positions. This lets funds eliminate the costs and effort of flow-induced trading while keeping investment strategies intact. RS also includes features for improving tax-efficiency. To date, it has provided more than \$2.6 billion in liquidity to ReFlow clients.

**NAVswap**, our cash equitization tool, matches overall fund performance on cash reserves. This enables funds to maintain a liquidity cushion while remaining, in effect, fully invested; precisely manage cash positions and market exposure; and put large inflows to work more strategically. ReFlow clients have used NAVswap to equitize more than \$4.3 billion in notional value since 2007.

*For more information on ReFlow's performance-enhancing solutions, please visit [www.reflow.com](http://www.reflow.com).*



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