File Number 4-582

# Target Date Funds—a good idea co-opted

*Comments submitted by Joseph C. Nagengast, Target Date Analytics LLC*

## Background: a brief history of target date funds

(See figure 1 for an illustration of the growth of target date mutual funds.)

The first tdfs were designed in response to one of the most persistent problems plaguing 401(k) plan sponsors (the employer) and service providers; that is, with the investment responsibility now in the hands of each participant, it was clear that the challenge was greater than the average skills of plan participants. Those in the retirement plan business began to acknowledge that participant education efforts were never going to make every participant into an expert investor, and they began to distinguish "do-it-myself" participants from "do-it-for-me" participants. Target date funds were specifically designed for this latter type of participant, those who preferred to have someone do it for them.

Wells Fargo and Barclays Global Investors, working together at the time, rolled out the first target date funds in March 1994. Their strategy was to get the investor safely to the target date and at that point to fold the dated fund into their Income fund (known there as "Today"). The LifePath 2000 Fund was "folded into" the Today fund in the year 2000. They didn't introduce their mid-decade funds (2015, 2025) until after 2005 so we didn't see a 2005 fund folding in at its target date.

Later in that decade and in the next, Fidelity, T. Rowe Price, Principal and Vanguard got into target date investing and began promoting them more heavily. The numbers of dollars pouring into target date strategies swelled when the ranks of former do-it-myself investor gave up and became do-it-for-me investors following three rough years in the market, 2000—2002.

When plan sponsors and participants really started adopting tdfs in big, meaningful numbers (2002—2007), the race was on for performance numbers.

## Where the train went off the track

The way to win the short term performance horse race (and the resulting market share) was through higher equity allocations. Each of the major fund families found justifications for 1) increasing the equity allocations across the glide path (See Figure 2, Glidepath illustration), and 2) extending the glidepath from the target date out to some imagined date based on life expectancy. Some extend their glidepath as much as thirty years beyond the target date.

Investors in 2010 funds believe that date in the name of the fund is significant to the design and management of the fund, but in these extended glidepath funds that date has no significance to the design or management. Rather, the point at which the glidepath finally ends is the significant date. If the fund managers are going to continue this risky practice, at the very least they should be required to re-label their funds. 2040 would be a more appropriate and transparent name for the fund in the example above.

These two changes correspond to the two biggest contributors to risk in tdfs are 1) the amount of equity in the fund, and 2) the design of the glidepath. Remember, the glidepath is merely the dynamic aspect of the asset allocation.

There is some theoretical rationale for employing a glidepath throughout the accumulation phase. No credible rationale has ever been proffered for using a glide path in the distribution phase.

This is what drove the majority of target date funds so far off course and caused the unacceptably large losses to 2010 funds in 2008. The problem arises from fund managers attempting to use the key engine of target date funds, the glidepath, for purposes other than its primary function—getting investors safely to their target date with their accumulated contributions plus inflation, intact. When the glidepath is enlisted to perform other functions, its ability to achieve its primary function is degraded. (See “What Target Date Funds Can Do.doc”)

In popular discourse, the cause for the unacceptable and very great losses in short-dated funds, is often attributed to the dominance of all-proprietary funds in the underlying investments and to the lack of alternative investments such as commodities and TIPS in the portfolios.  It is true that these two factors contribute to poor performance but their impact on overall performance is much less than the two primary causes, 1) excessive equity-laden portfolios close to and beyond the target date, and 2) glide paths which ignore the target date.

Both of these flaws stem from misunderstanding or misappropriating the purpose of target date funds as we discussed above.  These excessive losses weren’t necessary. (Please see “Dec 2008 OTI Defensive.pdf” and “OTI Performance Report 12312008.pdf.”)

## Recommendations

We at Target Date Analytics LLC are very much in favor of target date investing. Tdfs can be an enormous boon to the investment needs of defined contribution participants. Properly designed and managed they will serve participants very well as they accumulate and prepare to spend down their retirement nest egg. We urge the Senate to do nothing that would stop the adoption of target date funds in qualified retirement plans. At the same time, we think there are legitimate areas for improvement, improvements that may not be effected by market forces alone. These include the following:

- The name of each fund must bear some relationship to the way the fund is managed, that is, its glidepath. As in the example above, if a fund labeled 2010 is really targeted to “land’ at 2040, it should be re-labeled as a 2040 fund. (Note: “disclosing” that the 2010 fund isn’t actually designed for safety at 2010 will not work; it must be properly named.)
- In turn, the glidepath must be designed to provide for a predominance of asset preservation as the target nears and arrives.
- Prospectuses should be clear about the objectives of the funds—specifically, no circular definitions of fund objective should be allowed. Language describing the objective of a fund as dependent on its allocation should not be permitted. The objective is properly dependent on the fund’s allocation; not the other way around.

## Terminology:

**Target Date Funds** are also sometimes called LifeCycle Funds. They are intended to be comprehensive investment solutions rather than single asset-class funds; such as a large cap growth fund or a high yield bond fund.

**Target date funds ("Tdfs")** use a broad range of **asset classes** in an **asset-allocation portfolio** and adjust the mix of assets over time.

**Asset allocation** is simply the process of assigning a portion of the portfolio's assets to different asset classes; for example: 25% domestic equities (stocks); 15% foreign equities; 40% mid-term bonds; and 20% treasury bills.

**Asset classes** are those categories (and others) just mentioned, such as domestic equities, foreign equities, real estate, commodities, domestic bonds, foreign bonds, etc.

Asset Allocation funds have been around for a long time. They include such strategies as **balanced funds** (a set mix of stocks, bonds and cash) and **risk-based funds** (balanced funds with varying degrees of inherent portfolio risk) such as conservative, moderate aggressive funds.

**Risky asset and reserve asset** The principles of modern portfolio theory call for building portfolios out of a mix of a **Risky Asset** (with high potential performance and corresponding high risk) and a **Reserve Asset** (with relatively low earnings and risk characteristics. As commonly practiced, these two broad asset classes are often interpreted to be Stocks (risky) and Bonds (less risky) although that is not quite accurate.

What makes target date funds different from other asset allocation strategies is the use of a **Glidepath.**

A **glidepath** is quite simply the line, as it changes over time, between the risky asset and the reserve asset. (See Figure 2, Glidepath illustration)

**Accumulation Phase** is the part of an investor's lifecycle (this term actually has a long-accepted economic meaning quite separate from its use as a label for tdfs) during which investors set aside money for their retirement. During this phase, cash flows are predominantly positive; that is, contributions are going in, (except for occasional loans and hardship withdrawals) and very little dollars are coming out. This will be seen to have important implications for the design of the glidepath.

**Decumulaton (distribution) Phase** is the period beginning concurrent with retirement or shortly thereafter when investors begin drawing down their accumulated savings to fund their retirement. Note that current law requires minimum withdrawals begin at age 70 ½. This also has important implications for the glidepath design.

Figure #1

# Growth in Target Date Funds: # & $
## 12/31/2008

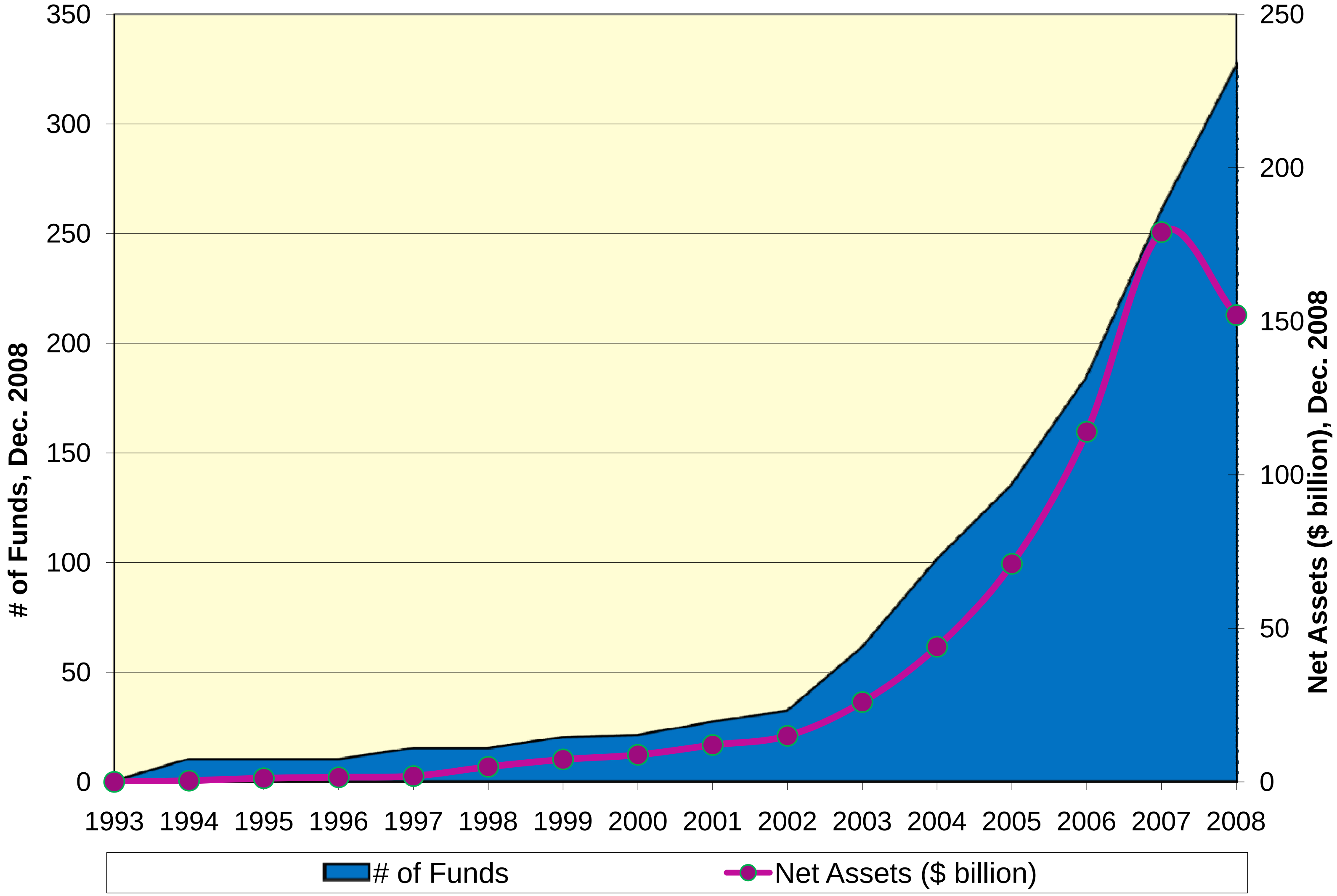
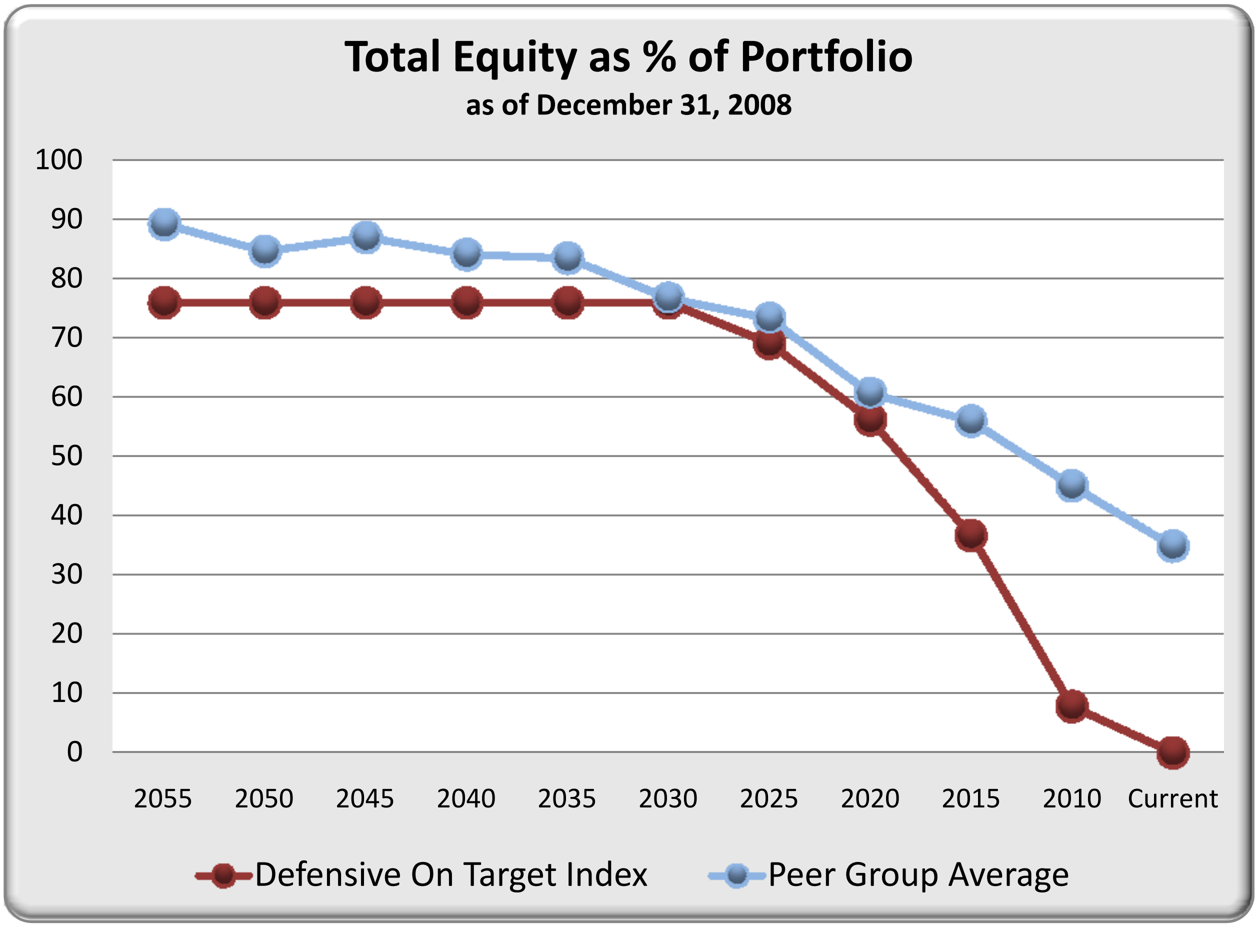


Figure #2 Glidepath Illustration



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*Selecting a target date fund family is an important but complex decision that is best made by matching the objectives of the fund family to those of the plan's participants. Several such objectives have been suggested but only one set stands out as universal and practical: (1) The floor objective (high likelihood) is to deliver at target date accumulated contributions intact plus inflation, and (2) A target objective (reasonable likelihood) is to grow assets as much as possible without jeopardizing the floor objective. For reasons described in the article, attempts to achieve other objectives jeopardize the attainment of these universal objectives. These alternative objectives include:*

- *Make up for inadequate savings*
- *Overcome "longevity risk"*
- *Guarantee returns*
- *Guarantee income*
- *Provide adequate retirement income*
- *Adjust for individual human capital differences*

# What Target Date Funds Can Do… and what they can't

At the core of the target date concept is the glide path; which is nothing more than an asset allocation strategy that changes over time. The glide path itself is the line marking the difference between the risky asset and the reserve asset, as it changes over time. It is important to understand what a glide path strategy can do and what it cannot do.

Throughout the eighties, nineties and well into the first decade of this millennium, we, in the retirement plan and investment businesses, worried aloud and often about participants' poor investment decisions. Aside from inadequate deferral rates, the biggest issues were inadequate diversification, inappropriate risk profiles and failure to adjust over time.

The simple genius of a glide path solves each one of those problems. They can efficiently deliver time-based portfolio management—allocation and rebalancing services—to millions of Americans saving for retirement. Target date funds offer a substantial improvement over the current investment portfolios of most participants in DC plans, who previously had been left to compete as amateurs in a professional arena.

*Why a glidepath?*

*Imagine a twenty-year old participant, at the start of her investment life-cycle. Assuming she will retire at age seventy, this participant has fifty years to put aside money for retirement, fifty years* *to manage or delegate an investment strategy that will get her safely to her retirement date with her contributions intact, plus whatever growth can be managed without jeopardizing the protective goal. Now allow us the liberty of letting this investor represent virtually all twenty-year olds in the work force, dependent on what they put aside, employer contributions, if any, and the rate of growth for the financial success of their retirement. We can aggregate most participants this way, based on their age, because the one factor we know about all of them is their age, and we can assume they all have approximately the same number of years until retirement. Moreover, to improve the model, we allow participants to choose which target date they want to aim for.*

*In the early years, our cohort of twenty-year old participant investors can take a swing-for-the-fences approach. They don't need to worry about too much about short-term losses, or short-term variability. They have small account balances and so even large percentage losses translate to small dollar losses. Their own contributions can quickly replace short term losses, and if anyone enjoys the benefits of long-term reversion to mean forces to help restore their account balances, they do.*

*In the later years, as the target date nears, we assume their account balances have grown geometrically, and as a result even small percentage losses can mean very large, unacceptable dollar losses. Moreover, when the target date is near, the probability that reversion-to-mean will restore any sustained losses is greatly reduced. Finally, participants near their target date can't hope to make up for losses by contributing more; that power too has been eroded by the passage of time.*

*To adjust the balance between asset growth and principle protection over time the investment glidepath was developed—allow for more growth (and volatility) in the early years and then begin reducing that exposure to risk over time according to a strategic plan—the glidepath.*

*There it is. That's the basic rationale for employing a glidepath.*

Given the above, we can posit a working definition of the primary objective of target date funds. That primary objective might be stated as follows, "Manage the portfolios of all participants over their saving life cycle so that they arrive at the target date with their total contributions intact, plus inflation." In addition, to the extent we don't jeopardize this primary, or floor objective, we can add a secondary, target, or 'stretch' objective, "To the extent the primary objective is not sacrificed, the fund will attempt to achieve growth of assets."

We don't suggest that the above language will be suitable for every situation. However, we do believe that these two objectives, along with their priority ordering could serve as a guideline or starting point for most target date fund objectives.

But as the target date arena gets more competitive, and providers seek ways to differentiate themselves from the pack, the competitive positioning may be taking its toll. Coming to market with a difference may make for a compelling ad campaign, but if the difference is more gimmick than substance, worse yet if the distinction of a new fund family is its ability to provide a non-core benefit, the ability of the glide path to deliver on its core promise will likely be compromised. Said another way, if the glide path is pressed into service for other missions it may lose its ability to deliver on its core mission.

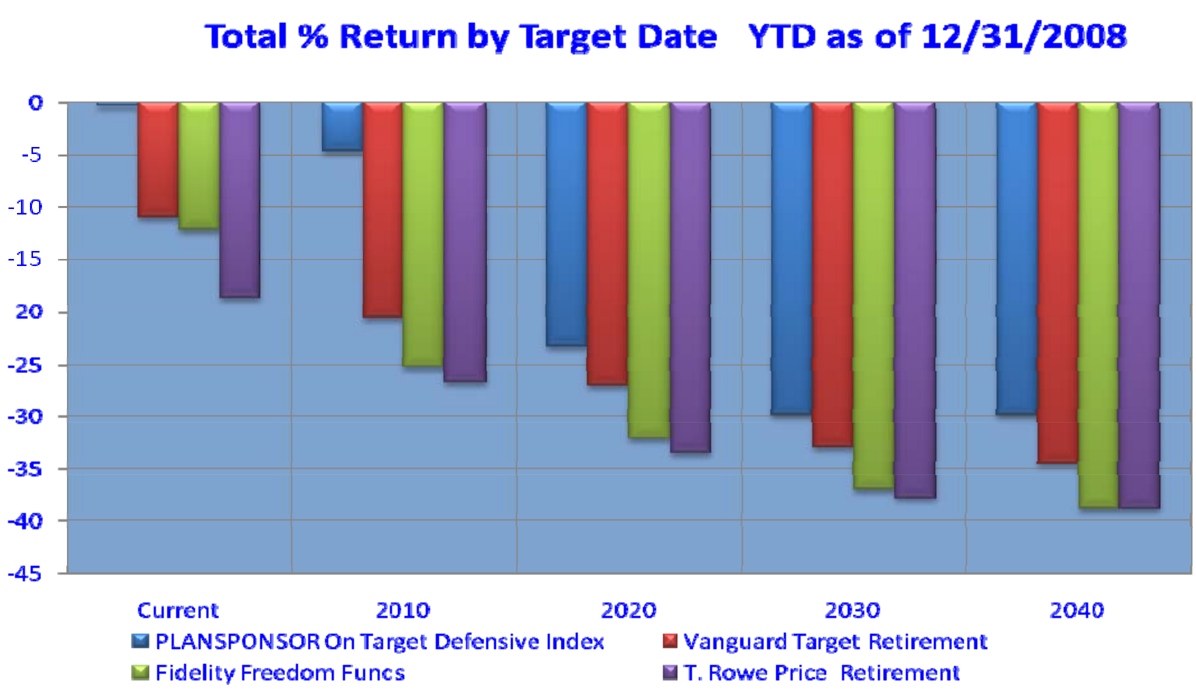
Here's a list of objectives that many target date funds attempt to achieve, but which can only be attempted by sacrificing the fundamental glide path proposition—the primary objective. If these goals could be achieved without sacrificing the primary goal of target date funds, we would indeed live in the best of all possible worlds. Unfortunately, we still live in a financial world in which increased returns come at the cost of increased risk. Plan sponsors should be aware that each of these ancillary objectives comes at a cost.

- Make up for inadequate savings
- Overcome "longevity risk"
- Guarantee returns
- Guarantee income
- Provide adequate retirement income
- Adjust for individual human capital differences

Let's take a look at each of these non-primary objectives and see how they jeopardize the core, or primary objective of target date funds.

Make up for inadequate savings

This is an admirable goal, but it is also naïve. It has been said, you can't solve a savings problem with an investment solution. Why? Because in attempting to do so, you not only fail to solve the savings problem, you also must put at serious risk, the already inadequate portfolio of savings. Remember the simple risk/return dynamic Taking more risk means incurring increased chance of loss. This is true in the long term but it is most painfully true in the short term. Consider calendar 2008, in which some 2010 funds lost over 30% of their value.



Overcome “longevity risk”
This goal has lots of ‘street appeal.’ It is sometimes stated as the risk of outliving your money. But it muddles the carefully defined roster of investment risks (market risk, financial risk, interest rate risk, enterprise risk, liquidity risk, counterparty risk, economic risk, etc.) by pandering to investor fears that they may not have enough money to last their lifetimes. Do investment management companies list “longevity risk” in their prospectuses along with these well-defined investment risks? Of course not, because it is not an investment risk at all. Living a long time is generally considered to be a good thing. Longevity is not the risk. The risk comes from not having enough money to last as long as your do. The only real way to make sure your money will last is to have so much you can self-insure, or to pool your assets and your risk with others in insurance contracts.

Guarantee returns
The only ways to “guarantee” returns are to invest in a no-risk portfolio, which by definition will not provide enough returns to keep pace with inflation, or to purchase an annuity. Scores of academics and professional researchers are involved in the task of developing combinations of insurance and portfolio-based strategies designed to provide investors with a comfortable level of returns without giving up so much in cost that the game is not worth the candle. If the solution were as simple as increasing the amount of equity in a portfolio the discussion would have been over long ago.

Guarantee income
Again, the only guarantees in finance come from insurance, either self-insuring, which in this case means you don’t need it, or through a contract with an insurance company, which, for an individual terminating defined contribution participant, means no purchasing power. The argument that you can assure an investor of income through portfolio construction, always seems to hinge on the requirement that the participant hold a lot of equities when he or she can least afford losses, at or near the beginning of the withdrawal period. And these strategies are not guarantees, although from the materials and the presentations one would think that the results are certain.

Provide adequate retirement income
This objective is really a combination of “make up for inadequate savings” and “guarantee income,” and the objections to it are the objections already raised for those two distracting objectives. Clearly, in this country we are facing a problem of insufficient retirement income, but the solutions proposed in the construction of target date portfolios won’t provide the answer. They will only serve to disable the one thing target date funds can do, provide suitable portfolio management over the accumulation phase.
Moreover, attempting to provide retirement income for participants by extending the glidepath past the target date reveals a fundamental misunderstanding of the purpose for a glide path. While we can provide a rationale for utilizing a glidepath in the accumulation phase, no one to date has offered a rationale that can connect a glide path to the recurring, regular withdrawal of assets from a portfolio.
We may yet get to a national solution for ensuring that every person entering retirement has adequate income, but asking a glidepath to carry that load is surely not the answer. Every day I see people riding their bikes past my office to the beach, but they’re usually smart enough to get off once they get to the sand. What worked on the road doesn’t work in the sand and surf.

Adjust for individual human capital differences
This is a particularly baffling development. Target date funds employ a glide path to make one very big, and very useful assumption, that most participants with the same number of years until their retirement date, can be efficiently aggregated into pools of investors with the same broad characteristics that change in the same way over time. Admittedly, this is an imperfect strategy, but its imperfections are easily overweighed by the great efficiency and utility it brings to large numbers of investors. Many young investors have too little financial assets to be able to afford personal financial planning assistance. As their assets grow, over time, with the efficient use of a glide path and age aggregation, the investors will reach the position wherein they can and should be able to benefit from more personalized investment strategies. Until then, attempts to undo the aggregation feature of the glidepath will be counterproductive.

*Concluding Remarks*

*In selecting a suite of target date funds, plan sponsors need to keep their eye on the ball; that is, the primary objective of target date funds. Unfortunately, competition for plan assets has led providers to offer target date structures that focus on other objectives. These offerings have appeal because they appear to solve additional problems; however, those objectives jeopardize the attainment of the primary objective and for that reason they should be avoided. Providers and plan sponsors need to come back to the basics. Then we can get on to the other problems facing plan participants, inadequate savings and security of retirement income.*

# PLANSPONSOR ON TARGET INDEX

Built and maintained by Target Date Analytics LLC

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See next page for Important Notes

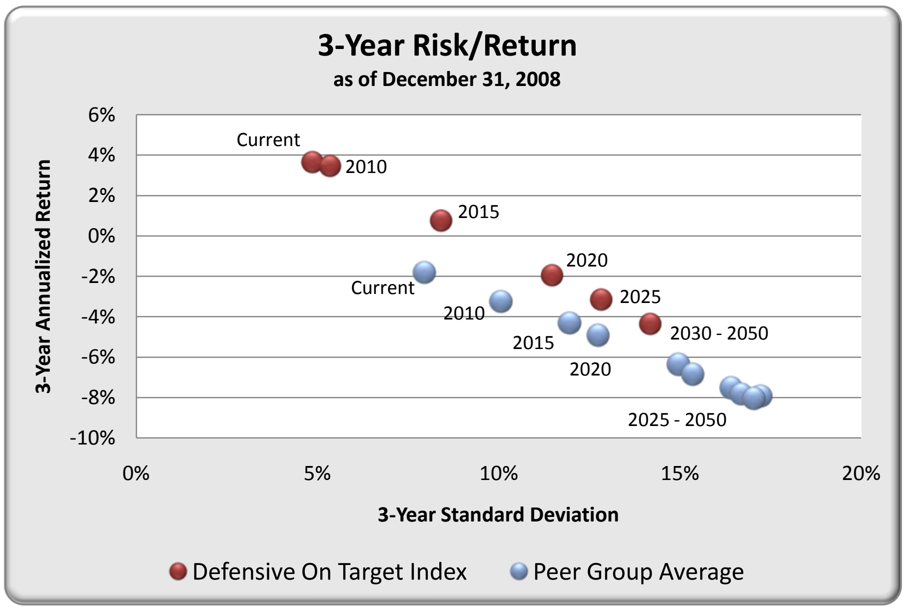
## DEFENSIVE MODEL

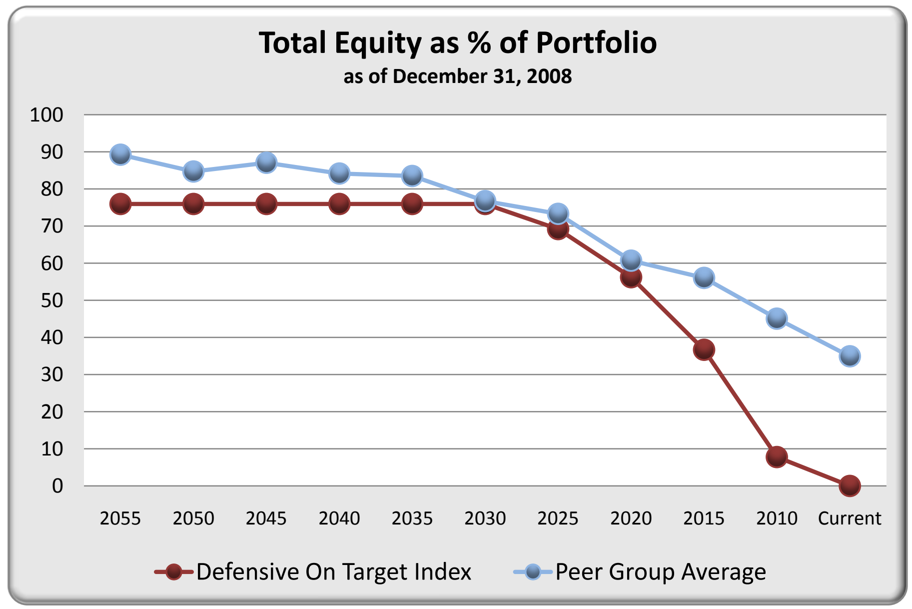
### Performance as of December 31, 2008

## Target Fund Peer Group

(as of 12/31/2008)

| PLANSPONSOR ON TARGET DEFENSIVE MODEL | 4th Quarter | TOTAL RETURN: 1 Month | 3 Month | YTD | 12 Months | 3 Year | 5 Year | 10 Year | Standard Deviation: 3 Year | 5 Year | (as of Dec 31, 2008) Total % Equity Allocation | Peer Group: 3-Year Return | 3-Year Std Dev | (as of Dec 31, 2008) Average % Equity Allocation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Current | -1.98% | 3.18% | -1.98% | -0.37% | -0.37% | 3.63% | 3.87% | 5.50% | 4.88% | 4.27% | 0.0 | -1.83% | 7.96% | 34.9 |
| 2010 | -3.90% | 3.40% | -3.90% | -4.68% | -4.68% | 3.45% | 4.89% | 5.11% | 5.37% | 4.85% | 7.8 | -3.26% | 10.06% | 45.1 |
| 2015 | -9.01% | 4.08% | -9.01% | -13.98% | -13.98% | 0.75% | 3.87% | 4.37% | 8.42% | 7.32% | 36.7 | -4.33% | 11.97% | 56.0 |
| 2020 | -14.12% | 4.76% | -14.12% | -23.28% | -23.28% | -1.95% | 2.85% | 3.63% | 11.48% | 9.79% | 56.3 | -4.94% | 12.76% | 60.7 |
| 2025 | -16.13% | 5.03% | -16.13% | -26.58% | -26.58% | -3.14% | 2.25% | 3.34% | 12.83% | 10.85% | 69.2 | -6.37% | 14.97% | 73.3 |
| 2030 | -18.14% | 5.31% | -18.14% | -29.89% | -29.89% | -4.34% | 1.66% | 3.05% | 14.18% | 11.92% | 76.0 | -6.87% | 15.36% | 76.8 |
| 2035 | -18.14% | 5.31% | -18.14% | -29.89% | -29.89% | -4.34% | 1.66% | 3.05% | 14.18% | 11.92% | 76.0 | -7.54% | 16.42% | 83.5 |
| 2040 | -18.14% | 5.31% | -18.14% | -29.89% | -29.89% | -4.34% | 1.66% | 3.05% | 14.18% | 11.92% | 76.0 | -7.86% | 16.70% | 84.2 |
| 2045 | -18.14% | 5.31% | -18.14% | -29.89% | -29.89% | -4.34% | 1.66% | 3.05% | 14.18% | 11.92% | 76.0 | -7.96% | 17.24% | 87.1 |
| 2050 | -18.14% | 5.31% | -18.14% | -29.89% | -29.89% | -4.34% | 1.66% | 3.05% | 14.18% | 11.92% | 76.0 | -8.07% | 17.05% | 84.7 |
| 2055 | -18.14% | 5.31% | -18.14% | -29.89% | -29.89% | -4.34% | 1.66% | 3.05% | 14.18% | 11.92% | 76.0 | N/A | N/A | 89.3 |



## IMPORTANT NOTES
## Information about the Data and Figures Displayed in This Document

The PLANSPONSOR On Target Defensive Indexes are one of four series of target date indexes, each series consisting of the following target date indexes: Current, 2010, 2020, 2030, 2040 and 2050. The four On Target Index ("OTI") series are: Defensive, Conservative, Moderate and Aggressive. The OTI were designed and are maintained by Target Date Analytics LLC and are sponsored by PLANSPONSOR (a publication of Asset International, Inc.). The Defensive OTI is considered the "signature" series of OTI. The Conservative, Moderate and Aggressive OTI series are designed as accommodations to strategies maintained by current target date fund managers.

Total Return and Average Total Return for the PLANSPONSOR On Target Indexes were calculated by using the widely reported returns of the underlying indexes and funds which constitute the OTI. The glide path and allocation model for the OTI do not change with market fluctuations thus providing additional support for the use of back-tested returns. Nevertheless, the decisions made by Target Date Analytics LLC with regard to the models are not necessarily the same decisions they would have made at the theoretical inception of the Indexes, ten years prior.

All of the underlying funds which constitute the PLANSPONSOR On Target Indexes are commercially available investment funds. The returns for the OTI reflect the full cost of the underlying funds which constitute the OTI. That is, the reported returns are net of all expenses of the underlying funds.

Total Return and Average Total Return for the non-TDA commercially available target date fund products in this report were obtained from Morningstar Principia® as of the date indicated in the report. Morningstar makes every effort to ensure accuracy of this data but cannot guarantee completeness and accuracy. Target Date Analytics LLC has no affiliation with any of the funds reported by Morningstar® and no affiliation with Morningstar®.

"Current" is the category name Target Date Analytics LLC applies to target date funds, such as 2000 and 2005, which have passed their target date and are still operating as separate funds, and to those funds in a target date series which are intended to serve investors in the post-target date period, such as "retirement income" or "today" funds. In those cases where more than one fund offered by a fund family falls into the "Current" category, results shown for that family are the average of the results for the several "Current" funds.

Nothing in the above should be interpreted as an offer to sell investment securities, nor a solicitation of an offer to sell or purchase investment securities.

Target Date Analytics LLC makes every effort to ensure accuracy in these reports but cannot guarantee completeness or accuracy.

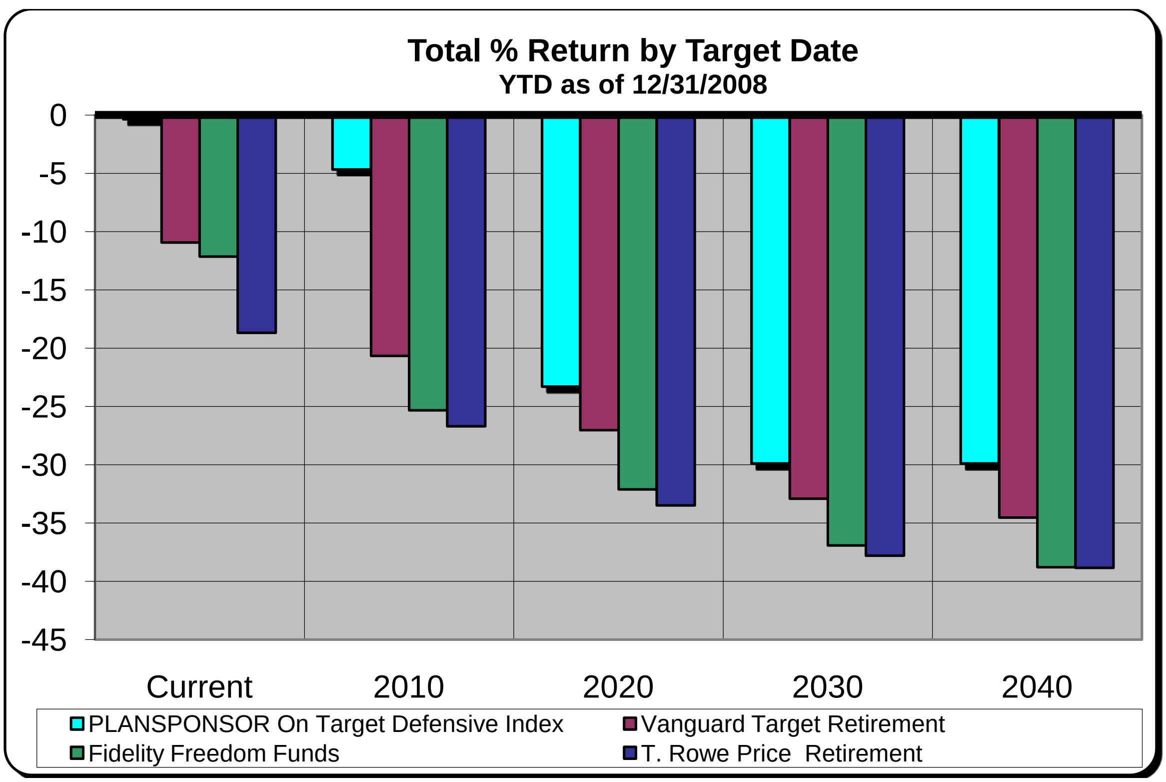
Past performance is not a guarantee of future performance.

# *PLANSPONSOR On Target® Defensive Index (OTI)*

## Year-to-Date PERFORMANCE REPORT*
## (as of December 31, 2008)

One-Year Total Percentage Return   January 1, 2008 – December 31, 2008

| Target Date | PLANSPONSOR On Target Defensive Index | Vanguard Target Retirement | Fidelity Freedom Funds | T. Rowe Price Retirement |
|---|---|---|---|---|
| **Current** | (0.37) | (10.93) | (12.14) | (18.69) |
| **2010** | (4.68) | (20.67) | (25.32) | (26.71) |
| **2020** | (23.28) | (27.04) | (32.12) | (33.48) |
| **2030** | (29.89) | (32.91) | (36.93) | (37.79) |
| **2040** | (29.89) | (34.53) | (38.80) | (38.85) |



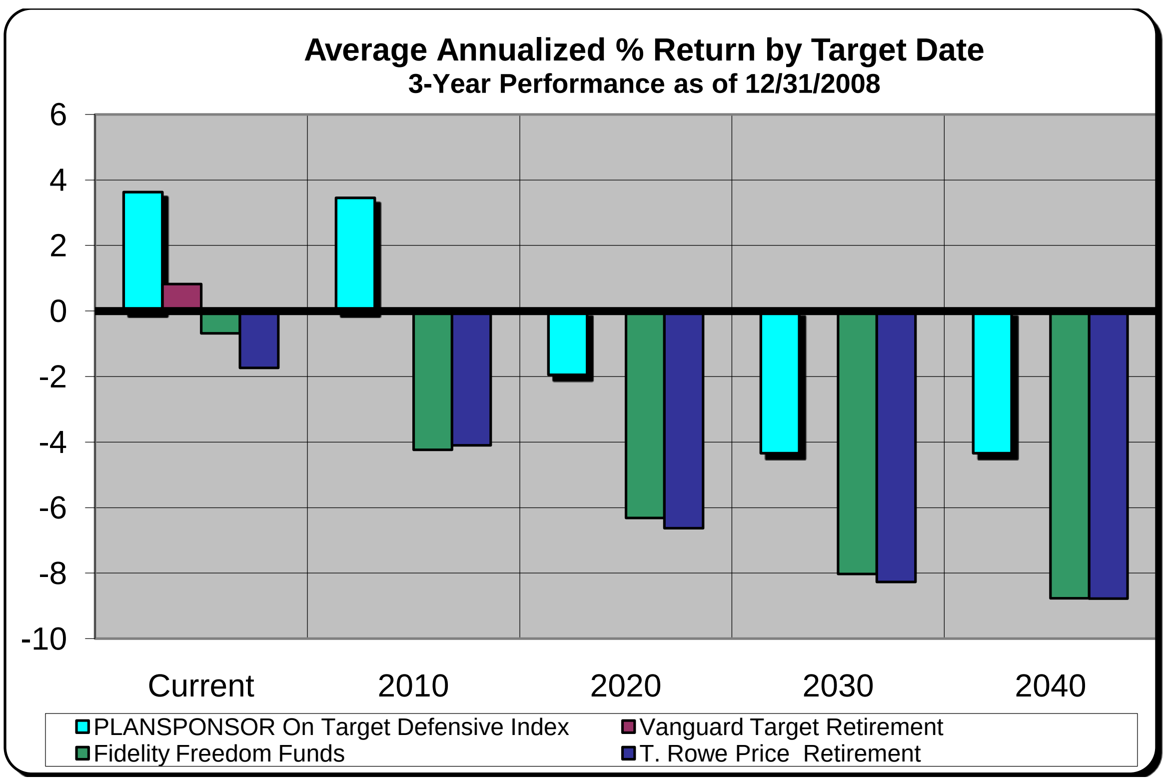

***See IMPORTANT NOTES section of this document.**

## *PLANSPONSOR On Target® Defensive Index (OTI)*

### 3-Year PERFORMANCE REPORT*
### (as of December 31, 2008)

3-Year Average Annualized Percentage Return   January 1, 2006 – December 31, 2008

| Target Date | PLANSPONSOR On Target Defensive Index | Vanguard Target Retirement | Fidelity Freedom Funds | T. Rowe Price Retirement |
|---|---|---|---|---|
| Current | 3.63 | 0.82 | (0.68) | (1.74) |
| 2010 | 3.45 | - | (4.24) | (4.10) |
| 2020 | (1.95) | - | (6.32) | (6.63) |
| 2030 | (4.34) | - | (8.03) | (8.27) |
| 2040 | (4.34) | - | (8.77) | (8.78) |



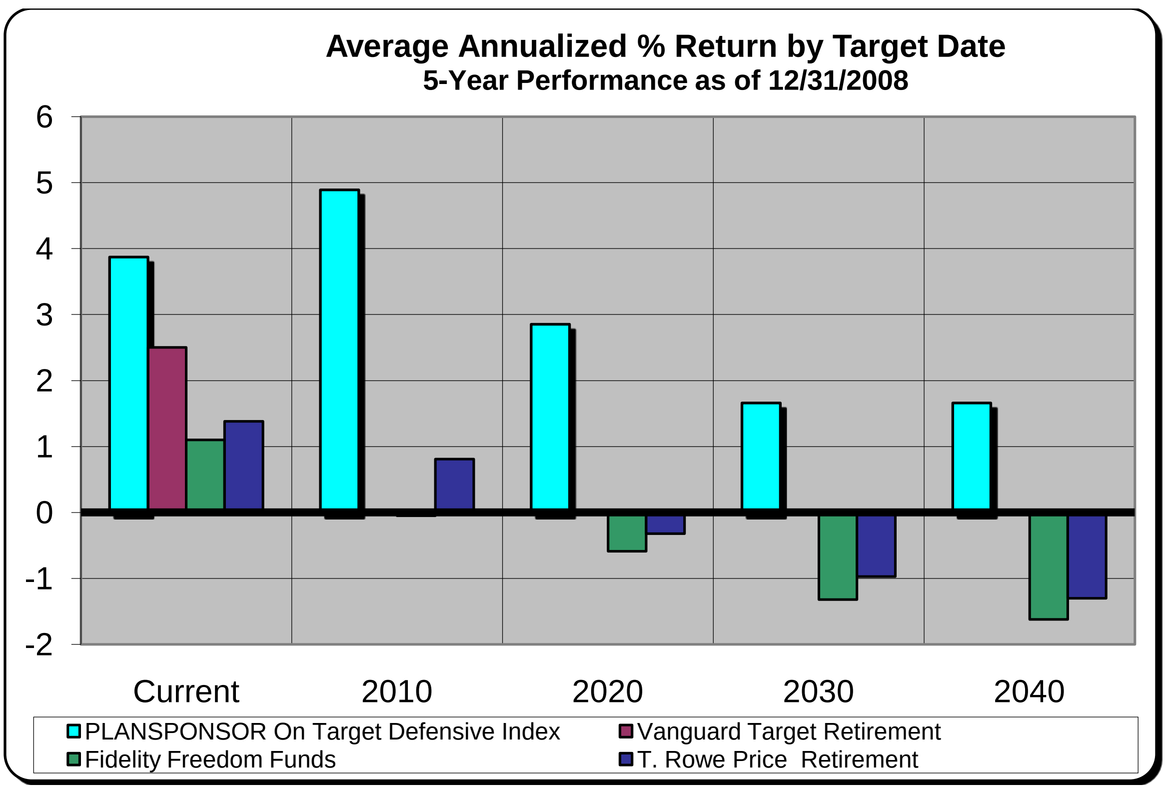

*See IMPORTANT NOTES section of this document.

## *PLANSPONSOR On Target® Defensive Index (OTI)*

### 5-Year PERFORMANCE REPORT*
### (as of December 31, 2008)

5-Year Average Annualized Percentage Return   January 1, 2004 – December 31, 2008

| Target Date | PLANSPONSOR On Target Defensive Index | Vanguard Target Retirement | Fidelity Freedom Funds | T. Rowe Price Retirement |
|---|---|---|---|---|
| Current | 3.87 | 2.50 | 1.10 | 1.38 |
| 2010 | 4.89 | - | (0.05) | 0.81 |
| 2020 | 2.85 | - | (0.59) | (0.32) |
| 2030 | 1.66 | - | (1.32) | (0.97) |
| 2040 | 1.66 | - | (1.62) | (1.30) |

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- Total Return and Average Total Return for the PLANSPONSOR On Target Indexes were calculated by using the widely reported returns of the underlying indexes and funds which constitute the OTI. The glide path and allocation model for the OTI do not change with market fluctuations thus providing additional support for the use of back-tested returns. Nevertheless, the decisions made by Target Date Analytics LLC with regard to the models are not necessarily the same decisions they would have made at the theoretical inception of the Indexes, ten years prior.

- All of the underlying funds which constitute the PLANSPONSOR On Target Indexes are commercially available investment funds. The returns for the OTI reflect the full cost of the underlying funds which constitute the OTI. That is, the reported returns are net of all expenses of the underlying funds.

- Total Return and Average Total Return for the non-TDA commercially available target date fund products in this report were obtained from Morningstar Principia® as of the date indicated in the report. Morningstar makes every effort to ensure accuracy of this data but cannot guarantee completeness and accuracy. Some three- and five-year average annual returns are not reported (e.g., Vanguard Target Retirement 2010, 2020, 2030 and 2040 funds) as those funds do not have three or five years of performance history. Target Date Analytics LLC has no affiliation with any of the funds reported by Morningstar® and no affiliation with Morningstar®.

- "Current" is the category name Target Date Analytics LLC applies to target date funds, such as 2000 and 2005, which have passed their target date and are still operating as separate funds, and to those funds in a target date series which are intended to serve investors in the post-target date period, such as "retirement income" or "today" funds. In those cases where more than one fund offered by a fund family falls into the "Current" category, results shown for that family are the average of the results for the several "Current" funds.

- Nothing in the above should be interpreted as an offer to sell investment securities, nor a solicitation of an offer to sell or purchase investment securities.

- Target Date Analytics LLC makes every effort to ensure accuracy in these reports but cannot guarantee completeness or accuracy.

- Past performance is not a guarantee of future performance.

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