

Ibbotson Target Maturity Report



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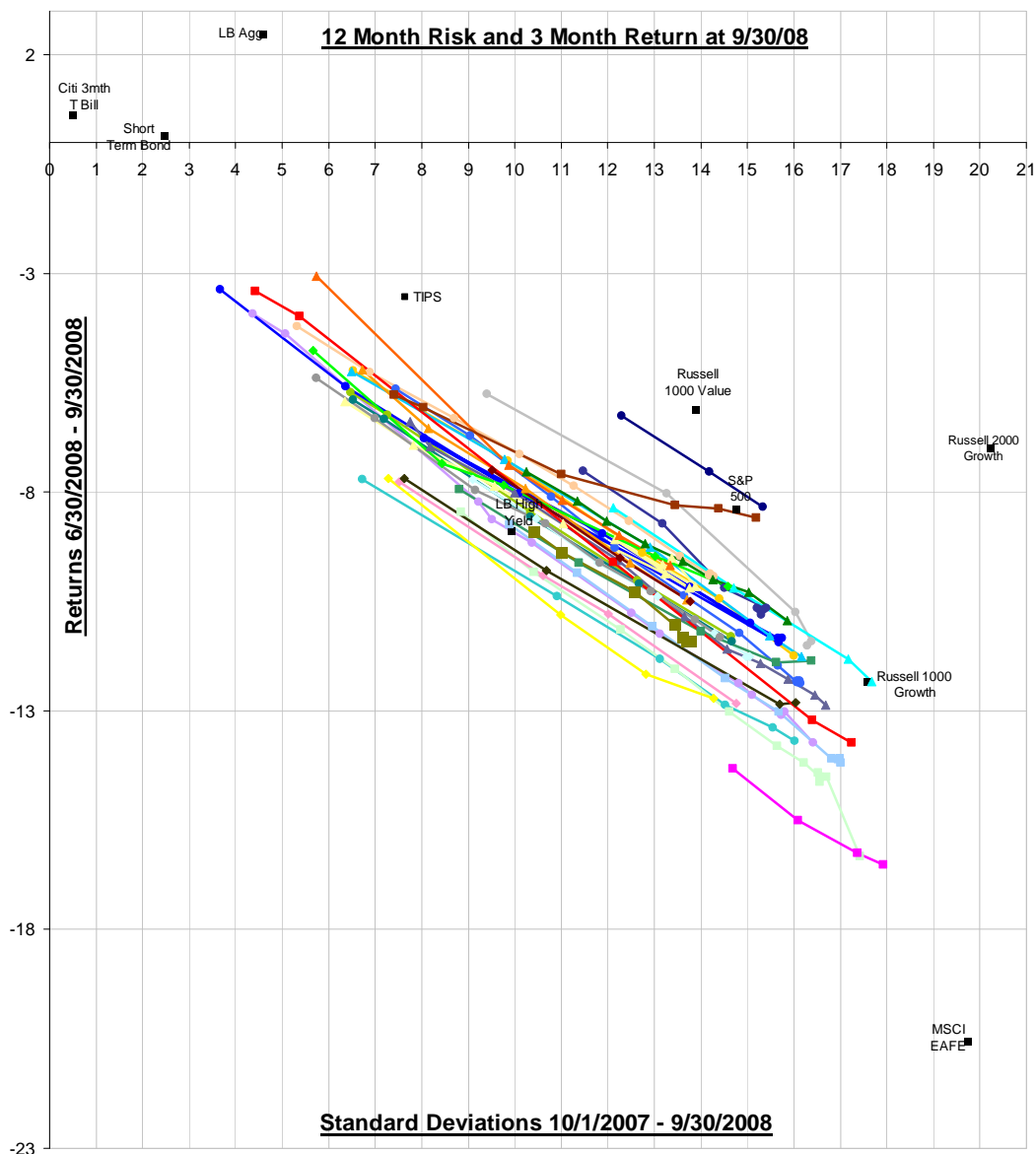
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The volatility that we have all experienced this quarter presents a perfect opportunity to discuss the importance of risk tolerance in selecting an appropriate target maturity fund. We will return to risk tolerance shortly, but first let's answer the question of how target maturity funds fared this quarter.

The Bad News: Global capital markets are in turmoil.

The Good News: Almost none.



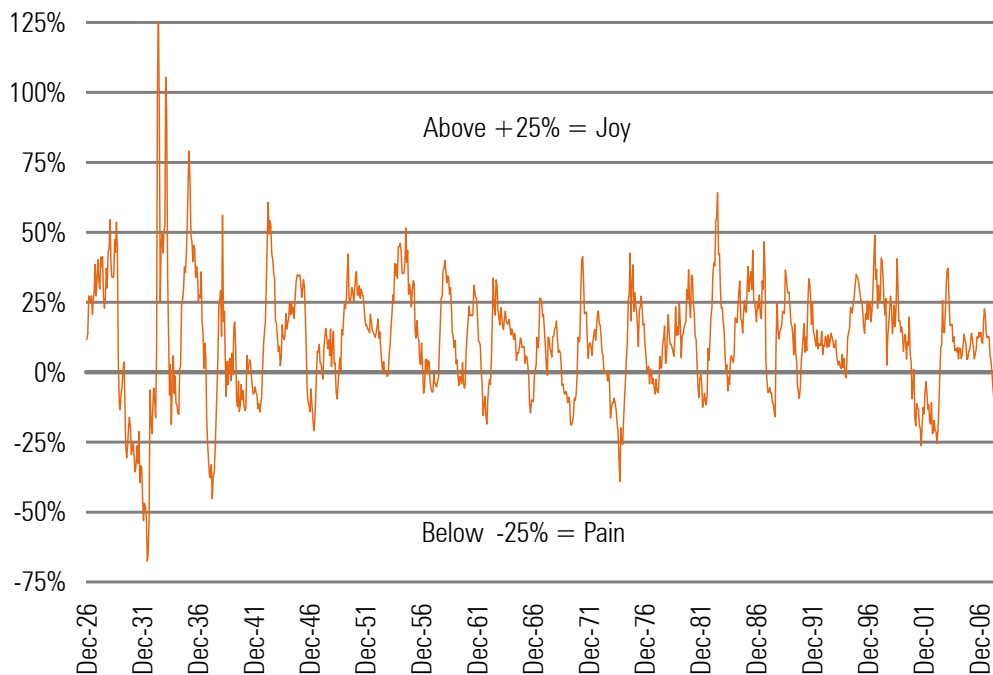
Source: Ibbotson Associates

Our short-term historical risk and return, efficient frontier-like graph that we introduced last quarter summarizes the performance during the third quarter. It plots the 253 unique target maturity funds with at least a one-year track record (up from 204 last quarter). Quarterly returns are displayed on the vertical axis and annualized standard deviation based on 12 months of data is on the horizontal axis. We have connected the dots associated with the funds within a given fund family.

For the quarter ending September 30, 2008, most target maturity fund families did not escape the trouncing global equity markets experienced this quarter. In contrast with last quarter in which the aggregate stock-bond split was not the primary driver of return differences, this quarter, the stock-bond split was the largest return driver.

For the year, we have now experienced two very negative quarters and one flat-to-negative quarter. We suspect the pain target maturity investors have felt this year has many investors truly questioning their target maturity investment for the first time. Plan sponsors who moved quickly at the beginning of the year to automatically map investors into a target maturity solution are likely very concerned. The S&P 500 Index has lost about 22% over the last 12 months. As a measure of joy and pain, we plotted the rolling 12-month returns of the S&P 500 Index starting in 1926. As you can see, there have been very few moments in history with greater 12-month losses.

Rolling Historical Returns



The average target maturity fund lost 10.0% in the third quarter, which is far worse than second quarter loss of 0.9% and exceeded the first quarter's terrible loss of 6.8%. In a down market such as this, we would typically expect target maturity funds to outperform the S&P 500 Index. This was not the case this quarter, as the S&P 500 Index's -8.4% quarterly return was trounced by the terrible performance of non-U.S. equities.

We organized the 253 funds into 13 groups based on the funds' target maturity date.

Target Maturity Fund Performance (Q3 – 2008)

Date	Max	Average	Min	# of Funds
Income	-3.1%	-5.6%	-8.7%	20
2000	-4.4%	-6.4%	-8.5%	2
2005	-5.3%	-7.6%	-9.8%	6
2010	0.0%	-7.8%	-14.3%	30
2015	-0.5%	-8.7%	-15.5%	27
2020	-5.3%	-9.9%	-16.2%	31
2025	-7.5%	-10.2%	-13.8%	22
2030	-8.3%	-11.6%	-16.5%	30
2035	-8.3%	-11.3%	-14.5%	22
2040	-8.4%	-11.9%	-15.9%	27
2045	-9.5%	-11.9%	-14.6%	18
2050	-8.6%	-12.0%	-16.2%	16
2055	-12.3%	-14.3%	-16.3%	2

253

Source: Ibbotson Associates

The next table contains the performance of some of the most common asset class building blocks that make up target maturity funds.

Asset Class Performance

Asset Class	Q3 2008 Return	12 Month Standard Deviation
U.S. Large Growth	-12.3%	17.6%
U.S. Large Value	-6.1%	13.9%
U.S. Small Growth	-7.0%	20.2%
U.S. Small Value	5.0%	17.0%
Non-U.S. Developed	-20.6%	19.7%
Emerging Markets	-26.9%	30.7%
Real Estate	5.6%	18.8%
Commodities (Futures)	-27.7%	27.3%
High Yield	-8.9%	9.9%
U.S. Aggregate Bonds	2.5%	4.6%
U.S. Short-Term Bonds	0.2%	2.5%
TIPS	-3.5%	7.6%
Cash	0.6%	0.5%

Source: Ibbotson Associates and Morningstar Direct

Three numbers leap from the table above—non-U.S. developed, emerging markets, and commodities all lost more than 20%. For funds with similar amounts of total equity exposure, the split between U.S. stocks and non-U.S. stocks was the primary driver of relative performance. In fact, the miserable performance of non-U.S. stocks caused the average target maturity fund to underperform the S&P 500 Index. The returns of emerging markets and commodities were so dismal, that their plot points are not displayed on our risk and return efficient frontier graph. Funds with substantial exposure to these three asset classes were dragged toward the dreaded southeast corner of the risk and return space.

In contrast with first two quarters when commodities returned 9.6% and 16.1%, they gave back these impressive gains and then some, losing 27.7% in the third quarter. The best-returning asset classes were real estate and U.S. small value with returns of 5.6% and 5.0% respectively.

Returning to this quarter's risk and return graph, and reviewing the detailed asset allocation holdings of the top-performing fund families, we see that the best-performing funds had low allocations to commodities and non-U.S. stocks and relatively large allocations to real estate. Finally, funds with a small-value bias tended to outperform funds with a large-growth tilt.

In light of this terrible all-around performance, we highlight the importance of selecting a target maturity fund family that is appropriate for a given investor's risk tolerance.

Risk Tolerance and Target Maturity Funds

The vast majority of target maturity fund families assume some average level of risk tolerance or ignore it completely. The advantage of this is simplicity is that a single factor—age—determines the appropriate fund. The disadvantage is that it is far too simple—like it or not, different investors have different risk tolerance levels.

Target maturity fund manufacturers struggle to prove that the glide path(s) of their funds are superior. There really aren't very good methods for doing this; nevertheless, in a quest to prove the superiority of their glide paths many manufacturers have turned to Monte Carlo simulation. Monte Carlo simulation can be a wonderfully useful tool. However, there is a tendency to focus on median results representing the middle expected outcome at an arbitrary end point (e.g. retirement or life-expectancy), which masks the details of the journey to that outcome. The highest median end point results are produced by the most aggressive glide paths often leading fund manufacturers to create more aggressive glide paths and plan sponsors, advisors, consultants, and investors to select more aggressive glide paths.

For most investors the journey matters. As with any portfolio, if the recent market turmoil has caused an investor to jump from their strategic asset allocation to a much safer allocation then they were in the wrong strategic asset allocation. While the current financial crisis and market meltdown are unusual, these types of events should be expected. "Crises" occur with some regularity: the stock market crash of 1929, World War II, Vietnam War, the nifty-fifty, the oil embargo, black Monday, Gulf War I, the tech bubble, 9-11, and now the sub-prime credit crunch. Similar events will continue to shake the capital markets in the future, and an investor's strategic asset allocation should help him or her participate in up markets while riding out the down markets.

To examine target maturity funds' range of aggressiveness, we divided them into groups based on their maturity dates, and identified the most aggressive and the most conservative funds based on equity exposure. Keep in mind that not all fund families have funds at each five-year incremental target date.

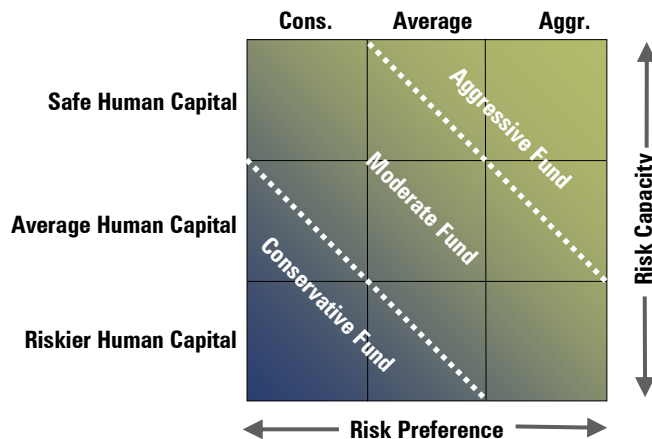
Performance Comparison (Q3 – 2008)

Date	Most Conservative Fund		Most Aggressive Fund	
	Equity Allocation	Q3 Return	Equity Allocation	Q3 Return
Income	18%	-3.4%	64%	-5.8%
2000	25%	-4.4%	47%	-8.5%
2005	42%	-5.3%	56%	-9.8%
2010	26%	-7.0%	66%	-11.1%
2015	39%	-6.5%	82%	-8.0%
2020	54%	-7.6%	82%	-16.2%
2025	54%	-8.9%	93%	-10.8%
2030	70%	-9.0%	92%	-13.2%
2035	62%	-10.1%	94%	-14.1%
2040	77%	-9.7%	98%	-13.7%
2045	66%	-11.2%	95%	-11.7%
2050	81%	-9.7%	93%	-2.6%
2055	87%	-12.3%	93%	-16.3%
Average	54%	-8.1%	81%	-10.9%

Source: Ibbotson Associates

While all of the funds were down, we can see that the most aggressive funds were down far more than the conservative target maturity funds. These differences are meaningful. The average differential was nearly 3% (a number that would have been far greater had one super-performing, aggressive 2050 fund not sidestepped financials and energy during the quarter).

In addition to the standard due diligence one would carry out when selecting a target maturity fund, there are two key investor traits to consider: risk capacity and risk tolerance. Risk capacity is an objective measure of an investor's ability to take on risk while risk tolerance is subjective measure of an investor's risk preference. The primary determinant of risk capacity is the stability of the labor income associated with investor's human capital, e.g. a government worker with a defined benefit pension has safe human capital and a fully commission-based worker without a defined benefit pension has riskier human capital. Investors can be scored and plotted on a target maturity glide path style box to help identify an appropriate glide path.



Source: Ibbotson Associates

For more details on risk tolerance and risk capacity, please see our target maturity white paper (<http://corporate.morningstar.com/ib/documents/MethodologyDocuments/IBBAssociates/TgtMaturityMethod.pdf>).

About Ibbotson

Ibbotson Associates is a leading independent asset allocation provider offering investment advisory services, retirement advice programs, and customized research. Ibbotson applies academic research to create real-world solutions for financial institutions. Our clients include many of the top brokerage firms, insurance companies, banks, asset managers, and retirement plan providers. Ibbotson was founded in 1977 and is a Morningstar company.

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Appendix: Index Definition

Standard & Poor's 500 Index: Market-capitalization-weighted index of 500 widely held stocks. Member companies are chosen based on market size, liquidity, and industry group representation. Included are the stocks of industrial, financial, utility and transportation companies.