

## **Managing Risk: Take a Page from the Pros**

### **RiskMetrics' cold, calculating method for balancing portfolios' risks and rewards**

Ask any money manager what separates the pros from novice investors, and he'll whisper two words: risk control. The experts know not only how much they expect to make on an investment but how much they can possibly lose. Yet most 401(k) investors just think of the upside when they put their money into different mutual funds. If they do think of the downside, it is only in vague, undefined terms.

If you're not willing to risk losing some money, chances are you'll never make enough to retire. A basic tenet of financial markets is that investors are rewarded for the risk they take. Stocks, which are more volatile in their price movements than bonds, have outperformed bonds over the past century.

Sure, you have to take risk, but how do you quantify it? RiskMetrics Group, formerly the in-house risk-management unit of J.P. Morgan, has developed tools to stress-test individual investor portfolios that are similar to those used to analyze risk for its blue-chip clients, such as Charles Schwab, Goldman Sachs, and, of course, J.P. Morgan Chase. (These tools are available at the firm's free Web site, RiskGrades.com.) Such "value-at-risk" analysis is not without its critics. The Big complaint: it ignores any qualitative insight an adviser has to offer about the portfolio's individual securities or its fund managers. But it can help you understand your exposure to loss.

**THE 401(k) CHALLENGE.** The system works like this: For every holding in a portfolio, RiskMetrics assigns a RiskGrade, a measure of the maximum likely move that a fund or stock could make in a year, based on its historical volatility. The grades range from 0 to 1000, with 100 being the long-term average for all stocks. To calculate the loss/gain potential, you divide this number by five. So a 100 RiskGrade represents a 20% potential annual loss, or gain if the volatility works in your favor. A 1000 grade would reflect a 100% possible loss and a 200% possible gain and would only apply to extremely leveraged portfolios.

How would RiskMetrics analyze the typical 401(k) participant's portfolio? Of course, every investor's situation is different, but many people share similar 401(k) investment options and retirement goals. So BusinessWeek asked RiskMetrics to create portfolios with the 10 most popular 401(k) funds offered through the largest fund families, Vanguard Group and Fidelity Investments. (The funds were selected based on assets and availability in as many retirement plans as possible.) We also asked the firm to include a generic stable-value fund and a company stock offering, which are found in many 401(k) menus.

**NO FAVORITES.** The portfolios were for investors in three age groups -- 40, 50, and 60 -- and for each, RiskMetrics established a target RiskGrade, assuming the person would cash out at age 70. Analyzing the historical returns for taking on various risk levels, RiskMetrics projected that the 40-year-old with a 75 RiskGrade portfolio would earn a 9% annualized return; lowering the grade to 50 at age 50 would earn 7%; and the 60-year-old with a 25 RiskGrade would get 5%.

Such projections are standard for asset-allocation plans. The difference here is that RiskMetrics calculates expected returns for any given fund based on its RiskGrade, which is derived from its share-price volatility over the past six months. Such short-term data have proved more effective at predicting future volatility, the company has found, because it captures the risk characteristics of a fund's portfolio today, not two or three years ago when it may have had different holdings. In fact, half the RiskGrade is derived from the past eight days' price movements.

RiskMetrics also ignores any performance edge a portfolio manager may have had over an index. In other words, if a manager's fund was just as volatile as the Standard & Poor's 500-stock index, which currently has a RiskGrade of 88, but the manager beat the index, RiskMetrics would not overweight the fund in the portfolio. "There is no empirical evidence that the majority of fund managers who have outperformed an index in the past can continue to outperform that index," says Michael Thompson, a market strategist at RiskMetrics.

**RADICAL DEPARTURES.** Such an assumption leads to radically different conclusions than a qualitative analysis of Vanguard's and Fidelity's funds would. For instance, RiskMetrics recommends that 25% of a 40-year-old Vanguard

investor's portfolio be in Vanguard U.S. Growth Fund, a large-cap growth fund. This fund has had a terrible performance record recently. Meanwhile, Vanguard Primecap Fund, a large-cap growth fund with excellent returns, gets only 10% of assets. The reason: U.S. Growth has a RiskGrade of 97, higher than Primecap's 92, so its expected return is greater, as is its risk of loss. But Thompson says a 40-year-old's time horizon is long enough to benefit from higher risk. "Our research shows you need 10 years to ride out a bad market," he says.

Experts who know the managers of these funds disagree with Thompson's analysis. "Vanguard U.S. Growth is a dog fund that has gone from bad to worse," says Daniel Wiener, editor of The Independent Adviser for Vanguard Investors. For a 40-year-old, Wiener would put 50% in Vanguard Primecap, his favorite in the fund family.

RiskMetrics also chose Vanguard's and Fidelity's S&P 500 index funds because the firm assumes active managers with similar RiskGrades and strategies will not be able to beat the index after costs. Wiener disagrees with this stance, as does Editor Jim Lowell of the Fidelity Investor newsletter. "Fidelity's strength rests on its managers' abilities to outsmart the market," Lowell says. "With Fidelity's Contrafund, Low-Priced Stock, and Diversified International funds, you have a trinity that will trump any index."

RiskMetrics' analysis goes beyond individual funds, however. It also calculates how the funds interact with each other to reduce the risk of the overall portfolio. For instance, a bond fund may rise when a stock fund falls and vice versa. Combined, they may be less volatile than if you invested in them individually. So if you calculate the weighted average of all the RiskGrades in these portfolios you will find that it doesn't equal the portfolio's grade. To measure the value of its allocations, RiskMetrics assigns a Diversification Benefit score to the portfolio, indicating how much the average RiskGrade is reduced by this particular allocation.

The portfolios with the greatest diversification benefits were for the 60-year-olds, a RiskGrade reduction of 16 for Vanguard's and 13 for Fidelity's investors from a weighted average of the funds' grades. (So without the benefit, Vanguard's and Fidelity's RiskGrades for the 60-year-old would be 41 and 38, respectively.) The reason is that the heavy bond allocations greatly reduce the risk of more volatile stocks, while even a sliver of equity improves the risk-adjusted returns of a bond-heavy portfolio. In the 40-year-old's portfolios, there is less risk reduction because the funds, although different, are primarily invested in stocks, which move somewhat in tandem, regardless of style.

**THE UNTOUCHABLES.** Curiously, RiskMetrics recommended no allocation to an employer's stock or to money-market or stable-value funds. In the case of company stock, there is "concentration risk," says Thompson. Without the risk-reducing benefits of diversification, the average stock currently has a RiskGrade of 146. But even if your particular company had a lower grade, Thompson doesn't recommend owning it. "You might think you're working for the greatest company in the planet, but a lot of people thought Enron was the greatest company on the planet," he says. By contrast, cash and stable-value funds were too low-risk and low-returning.

Once you've designed your portfolio, it's important to keep track of its risk level. Sometimes a major event such as Enron's collapse can cause the risk profile to soar. At such times, it is best to not make any knee-jerk changes. But be aware of how much you could lose if the heightened volatility continues. This way you'll know whether to stay the course or to reduce your risk. Then you'll be as smart as many of the pros.

By Lewis Braham

# Stress-Tested Portfolios

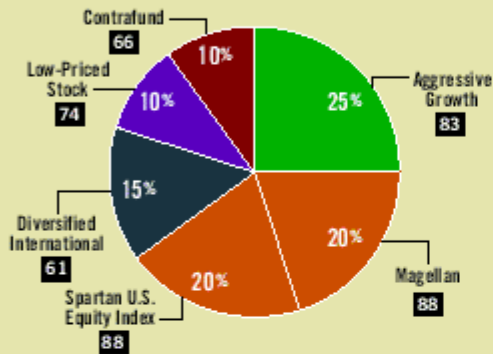
Starting with the most popular 401(k) fund offerings at Fidelity Investments and Vanguard Group, we asked RiskMetrics, a financial advisory company, to design three portfolios. RiskMetrics assigns grades from 0 to 1,000 for funds based on volatility—the higher the number, the more volatile the fund. The RiskGrades for the portfolios are not the averages of the individual funds, since diversification lowers risk. Also important: You won't find money-market funds, stable-value funds, or company stock in these portfolios. Risk-Metrics says money and stablevalue fund returns are too low, and company stock is too risky.

## RAW MATERIALS

- Large-Cap Growth
- Large-Cap Blend
- Large-Cap Value
- Mid-Cap Growth
- Small-Cap Growth
- Small-Cap Value
- Domestic Hybrid
- Bond
- Foreign
- Risk Grade

### FIDELITY FUNDS

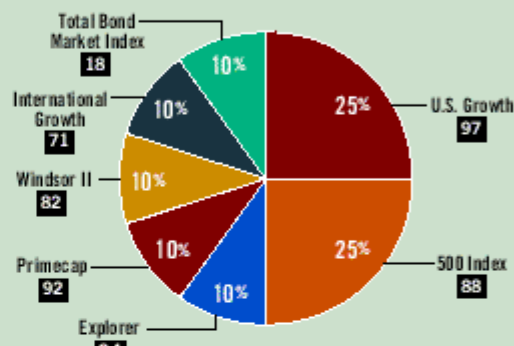
#### FOR A 40-YEAR-OLD



PORTFOLIO RISK: 75

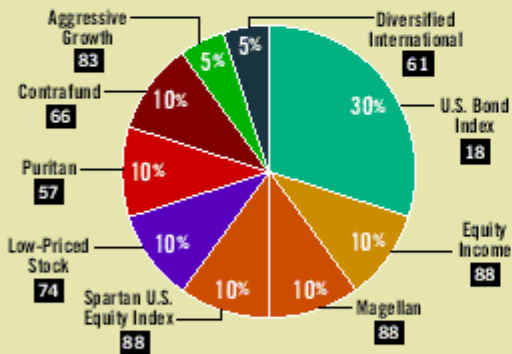
### VANGUARD FUNDS

#### FOR A 40-YEAR-OLD



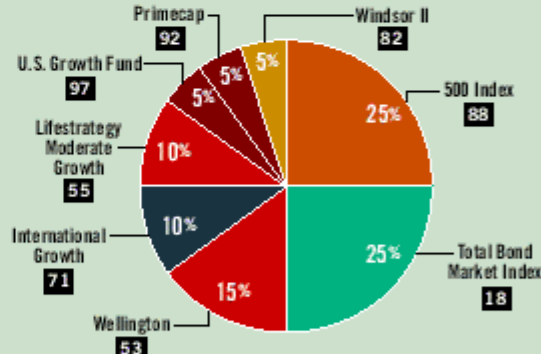
PORTFOLIO RISK: 75

#### FOR A 50-YEAR-OLD



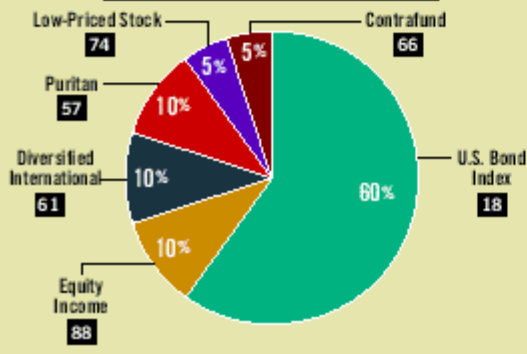
PORTFOLIO RISK: 50

#### FOR A 50-YEAR-OLD



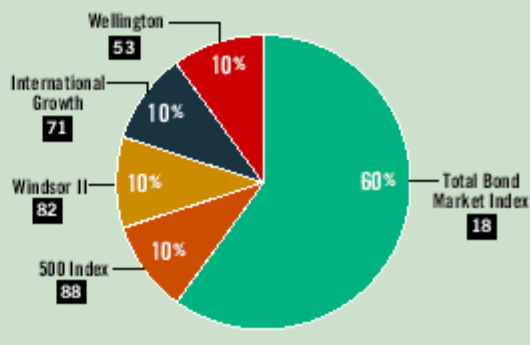
PORTFOLIO RISK: 50

#### FOR A 60-YEAR-OLD



PORTFOLIO RISK: 25

#### FOR A 60-YEAR-OLD



PORTFOLIO RISK: 25