Managing YOUR MONEY

BY GIBBONS BURKE

Money management is like sex: Everyone does it, one way or another, but not many like to talk about it and some do it better than others. But there's a big difference: Sex sites on the Web proliferate, while sites devoted to the art and science of money management are somewhat difficult to find.

There are many, many financial sites on the Web that let you track a portfolio of stocks on a glorified watch list. You enter in your open positions and you get a snapshot, or better yet a live, real-time update, of the status of your stocks based on the site's most recently available prices. Some sites, like Fidelity's, provide tools that tell you how your portfolio is allocated among various asset classes such as stocks, mutual funds, bonds and cash.

While such sites get at the idea of money or portfolio management, the overwhelming majority fail to provide the tools required to answer the central question of money management: "When I make a trade, how *much* do I trade?" (Try and find the topic of money management on the Motley Fool site.)

We'll discuss how to measure and manage trade risk and where to find the tools to help do it in a responsible and profitable manner. The key underlying concept is to limit how much money you are willing to let the market extract from your wallet when you make losing trades.

When any trader makes a decision to buy or sell (short), they must also decide at that time how many shares or contracts to buy or sell — the order form on every brokerage page has a blank spot where the size of the order is specified. The essence of risk management is *making a logical decision* about how much to buy or sell when you fill in this blank.

This decision determines the risk of the trade. Accept too much risk and you increase the odds that you will go bust; take too little risk and you will not be rewarded in sufficient quantity to beat the transaction costs and the overhead of your efforts. Good money management practice is about finding the sweet spot between these undesirable extremes.

Overtrading and undertrading

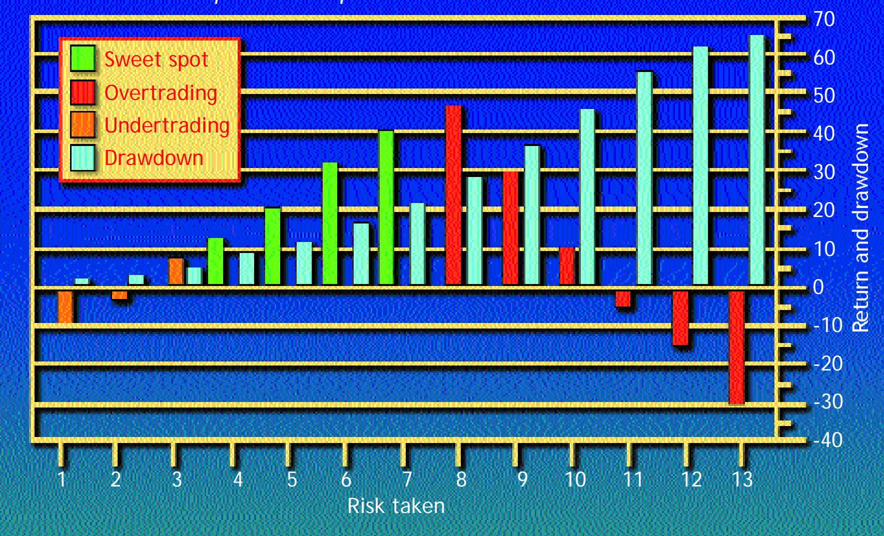
Figure 1 (below) shows the relationship between the long-term result of a series of trades and the amount of risk taken on a per-trade basis.

If you risk too little on each trade, shown by the undertrading zone, the returns will be too low to overcome transaction costs, small losses and overhead (quote feeds, electricity, rent, subscription to *Active Trader* magazine, etc.) and trading will be a losing proposition.

Risk more and the returns will increase, but note that the potential *drawdown* (account losses you will need to endure to get the return — another cost of doing business) always increases as you increase the per-trade risk. Returns continue to increase moving into the overtrading zone. Trading at the peak of the potential return curve is very difficult psychologically because the per-trade drawdowns

FIGURE 1 RISK vs. REWARD AND DRAWDOWN CURVE

Proper money management is a function of finding the point that maximizes return within acceptable risk parameters.



For many traders, money management is the ugly stepchild of the trading family. But you can ill afford to neglect this aspect of your trading plan.

Here's a breakdown of the fundamental money-management concepts you should understand, and tools and ideas on how to implement them.

can be extremely high, and the margin of safety for dealing with unexpectedly high losing trades is very low. In other words, you're getting into territory where one huge loser can blow you out.

The best place to live on this curve is the spot where you can deal with the emotional aspect of equity drawdown required to get the maximum return. How much heat can you stand? Money management is a thermostat — a control system for risk that keeps your trading within the comfort zone.

It's more than stops

It's surprising that even many active traders and investors have no idea what money management is about. They generally entertain a fuzzy notion that it has to do with setting stops, and that discipline is involved to make sure you execute the stops when they are hit, but their understanding doesn't go much further. Most people seem content to let their brokers track their trades for them, and the tools provided by the brokerage sites are adequate to the task.

But none of the online broker rating services tell you about brokers who provide the tools to help you manage these risks, and none of the traditional online or even most hyperactive day trading brokerage firms seem to cover this important contributor to trading success.

Why is this? Perhaps it can be explained by the extended bull run this market has enjoyed since 1982, and the speculative, maniacal extended leg of the bull market fueled by the dot.com land rush since 1997. This type of market — where making money consists of taking a ride on the back of the bull trend and buying the dips — tends to turn the merely bold (and possibly reckless) into market geniuses. The perceived risk in stock market investing has been very low, so the need to manage that risk has not been a pressing concern. Why worry when it will always come back and you can make a killing if you buy more?

More important to success than managing risk was the ability to charm your broker into getting you into the latest IPO allocation.

Two types of player

There are really two types of people operating in the financial markets: traders and investors. It is useful to understand the difference between the two — it may explain, in part, why so many people ignore risk management.

Many people who call themselves traders are, in reality, active investors. The typical investor only purchases stocks and buys as many as possible with all the available cash in his or her account. The risk-free position, for the typical investor, is to be fully invested in stocks for the long term, because, as we all know, stocks always go up. When active investors get more investment cash, they plow it into their mutual funds or buy individual stocks.

The investor's game seems to consist of selective hitchhiking on a freeway that is only going in one direction with the object of getting a ride from the Mercedes driving in the fast lane. They don't know how far the car is going to go and they don't really know when to bail out when the car starts driving in reverse.

They are slow to switch cars when one hits the breaks, runs out of gas or blows a head gasket. There is a great amount of hope and faith involved.

Many of these active investors don't pay attention because they operate under the assumption, reinforced by a 20-year old bull, that the market eventually will go up again and the safe thing to do is hold on or, smarter yet, buy more to lower the cost basis on the position. In this game it doesn't matter very much whether the car has good brakes or seatbelts — the gas pedal and cruise control are all that matter.

This sort of trading can work in good times, but when the bull turns into a bear, there is going to be a big pileup of fancy cars on the freeway full of drivers who don't know how to deal with the reality of investing risk.

Good *traders* operate differently. If buy-and-hold investing is like hitching a ride on the freeway, short-term, active trading is more like a demolition derby. Traders are not loyal to the stocks they buy and sell. They measure the risk of

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Faith, hope and **prayer** should be reserved for **God — the markets** are **false** and **fickle idols.**

each trade. They may have profit objectives but more commonly they use strict risk management as brakes and seatbelts to protect them in the melee and allow them to maneuver quickly. Success in this game is often more dependent on the use of brakes than the accelerator pedal.

Bad traders bring the biases and habits of the freeway-hitchhiking investor into the demolition derby of short-term, active trading, which requires completely different skills and a unique way of thinking. These traders go beyond simply buying dips and constant-dollar investing with all their cash: They trade on margin, borrowing money from their brokers to buy more dips and invest in more stocks. When they are tapped out on margin they use credit cards to plow more rental money into stocks — with little regard to the risk that goes along with this degree of leverage.

They are entering the demolition derby ring in a *borrowed* V12 Mercedes and, because they are not used to managing risk, they don't understand how to read the speedometer, operate the brakes or fasten the seatbelts.

Money management tasks

You need to perform the following important money management chores to do the job properly:

- Determine how much you are willing to risk on each trade.
- Understand the risk of the trade you are about to take and size the trade appropriately.
- Track the trade going forward.
- Pay attention to your risk points; take small losses before they become big losses.
- Review your performance.

Determining per-trade risk

The most important decision you need to make is how much you are willing to risk on each trade relative to your entire portfolio. For example, many of the top traders in Jack Schwager's *Market Wizards* books said they limited this amount to less than 2 percent of their stake.

The reason to keep this number small is to protect yourself from a series of losses that could bring you to the point of ruin. Losing trades are a fact of life when trading — you *will* have them. The key is to limit those losses so that you can endure a string of them and have enough capital to place trades that will be big winners.

Understanding trading risk

It's easy to determine how much risk there is in a particular trade. The first step is to decide — before you put the trade on — at what price you will exit the trade if it goes against you. There are two ways to determine this price level. The first is to use a trading method based on technical analysis that will provide a reversal signal or a stop-loss price for you.

The second is to let money management determine the exit when you don't have a technical or fundamental opinion about where the "I was wrong" price

Tools for understanding and practicing good money management

A few Web sites provide software or Web-based tools for understanding money management. Most of the large finance sites do a fair job at letting you track the value of your investments, but none of them are really suited for tracking the performance of a trading program — for that you need a piece of software.

The popular finance software packages, such as Quicken and Microsoft Money, can track the history of your transactions but don't do as good a job at treating these as trades. They're fine for showing you the value of your portfolio, and can save you time preparing your tax return, but they are not suited to executing the steps outlined in the main story.

Table 1 (right) is a list of sites and software packages that help with these tasks, some better than others. Money Maximizer, software written by traders for traders, is a good package for managing your trading risk by sizing your trades to the amount of risk you want

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TABLE 1 SOFTWARE SITES — SIZING THINGS UP

Software	Type	Risk Mgmt?	Company
Athena Money Management	Software	Yes	International Institute of Trading Mastery, Inc.
Fund Manager	Software	No	Beily Software
kNOW Software	Web site	Yes	
Money Maximizer	Software	Yes	Trading Research Design
Stocktick	Webware	No	NAC Consulting
StockVue 2000	Webware	No	NQL Solution
QCharts	Software	Yes	Lycos/Quote.com
Trade Tracker	Excel	Yes	TraderCraft Company
Medved Quote Tracker	Webware	No	2GK Inc.
Money 2000	Software	No	Microsoft
Quicken	Software	No	Intuit
Captool	Software	No	Captools Company
Portfolio	Web site	No	Quote.com
TradeFactory.com	Web site	Yes	TradeFactory.com
Money	Web site	No	Microsoft Investor

point is. This is where you draw a line in the sand and tell the market that it cannot take any more money out of your wallet.

The point is that no matter what your approach — whether technical, fundamental, astrological or even a random dartboard pick — you should not trade or invest in anything without knowing, at all times, what your exit price will be. You need to know this price ahead of time so that you don't have to worry about the decision when that price is reached — the action at that point should be automatic. You won't have time to muddle it out when the market is screaming in the opposite direction you thought it would go!

If you are using the first method, you can use this formula to determine how many shares of stock to buy:

$$s = \frac{er}{p-x}$$

where

s = size of the trade
e = portfolio equity (cash and holdings)
r = maximum risk percentage per trade
p = entry price on the trade
x = pre-determined stop loss or exit price

For example, Belinda has a trading account with a total value (cash and holdings) of $100,000 and is willing to risk 2 percent of that capital on any one trade. Her trading system gives her a signal to buy DTCM stock trading at $100 per share and the system says that the reversal point on that trade is $95. Plugging this into the formula tells Belinda that she can buy 400 shares of DTCM. The cost of this investment is $40,000, but she is only risking 2 percent of her capital, or $2,000, on the idea.

Belinda then gets a tip from her brother-in-law that KRMA is about to take a nose dive from its lofty perch at $40 because he heard from his barber that earnings of KRMA will be well below expectations. She's willing to go short another $10,000 of her stake on this idea. She studies a KRMAchart and can't see any logical technical points that would be a good place to put in a stop, so she uses the money management method to determine the stop according to this formula:

$$x = \frac{p(i-er)}{i}$$

where:

x = pre-determined stop loss or exit price
p = entry price on the trade
i = investment amount
e = portfolio equity (cash and holdings)
r = maximum risk percentage per trade

Since she's shorting KRMA, the value for *i*, $10,000, should be negative.

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Web Address	Price	Comments
www.iitm.com/software/ii05002.htm	$12,500	Associated with the money management practices of Dr. Van Tharp, an investment psychologist
www.beiley.com/fundman/desc.html	$39; manual $2	Specially suited for tracking mutual fund performance
www.moneysoftware.com	n/a	Software is no longer available but the site has very good information
www.moneymaximizer.com	free trial; Full $159; Pro $259	Written by a top-rated hedge fund manager
www.naconsulting.com	$24.95	—
www.stockview2000.com	free; banner advertisements	—
www.qcharts.com/	$89/mo.	Quote sheets track stops; calculate trade and portfolio risk updated in real time
www.tradercraft.com/download	freeware fee $25	Excel spreadsheets updated in real time
www.medved.net/QuoteTracker	free; no ads $60	—
www.microsoft.com	$64.95	—
www.intuit.com/quicken		—
http://captools.com	$249 - $3,500	Complete professional tool; includes tax accounting
www.quote.com	free	Daily portfolio valuations; e-mail alerts
www.tradefactory.com	$299 + $99/mo.	Based on the famous Turtle Trading methods
www.moneycentral.msn.com/investor		

Plugging these values into the formula above would tell Belinda that her stop price on the short sale of KRMA should be 48. If she didn't want to assign a high confidence on this trade she could reduce the max risk to 1 percent (r=0.01), which would bring the stop down to 44.

Another worthwhile variation to these methods is to use Ed Seykota's "core equity" for *e* in the formulas rather than the total value of all holdings in the portfolio. Core equity is what you have left when you subtract the total value at risk in all open positions from the total equity; value at risk in each trade is calculated by multiplying the number of shares in the position by the difference between the current price and the stop price on that trade.

Using the core equity value as the basis for sizing new trades has the desirable effect of automatically reducing the risk exposure on new positions when market volatility in your existing positions increases.

Tracking your trades

It is important to watch your positions as they progress and adjust your stop prices as the market moves in your direction.

In the first example, if DTCM moves from $100 to $120 and the stop is left at $95, what started as $2,000 or 2 percent at risk is now $10,000 (9 percent of the total equity) at risk.

The mistake most people make is to consider trade winnings on open "house money" — that somehow this money is less painful to lose than the money in your back pocket.

This is a bad mental habit. If losing 2 percent of equity on a trade would be painful to Belinda when her account was at $100,000, losing 9 percent after the stock has moved to $120 should be several times more so. Moving your stop loss up with the price on a winning trade does several good things: It locks in your profits and if you are using core equity to size new positions, it will allow you to take more risk on new trades.

Never move a stop backwards from its initial price — stops should always be moved to reduce, never increase, the amount of risk on a trade.

Past the initial risk you are willing to take, stops should be a one-way valve for the flow of money from the market to your account.

Terminating with prejudice

A money management plan will only be useful if you do what it tells you. This means planning your trades as outlined above and trading your plan. If a stop

Tools for understanding *continued from p. 71*

to take. The interface can be a bit clumsy and the program leaves a few things to be desired, but it's a good overall package; the "Size-It" tool (right) sizes your trades based on risk relative to core equity.

Another software package that showed a great deal of promise — but is no longer produced — is kNOW Software by MoneySoft.com. The Web site provides an excellent online manual and the tutorial is a worthwhile and instructive guide to good money management practices.

The Athena software looks good, too, but its price tag is rather steep: $12,500. The site is worth a visit — Dr. Van Tharp provides some good information on proper money management.

Excel makes an excellent tool for implementing the formulas listed above. (It's what I use for my own trading, in combination with Quote.com QCharts live quotes package. The Quote.com QFeed includes an add-in to power Excel spreadsheets with live quotes. The spreadsheet is freeware available at no charge on my Web site listed in the table.)

Some of the tools listed are a cross between software and a Web site ("Webware"). These packages are generally free but are paid for by banner ads displayed in the window of the software. The Medved quote tracker lets you turn off the ads if you register and pay the $60 fee.

Money management is a complex subject, but one that is necessary to master if you want to enjoy a sustained trading career. The books listed in "Money Management Reading" (above right) provide additional information on this multi-faceted topic.

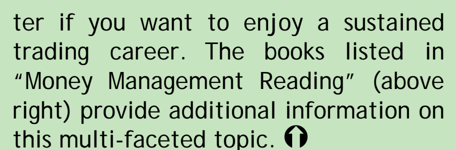
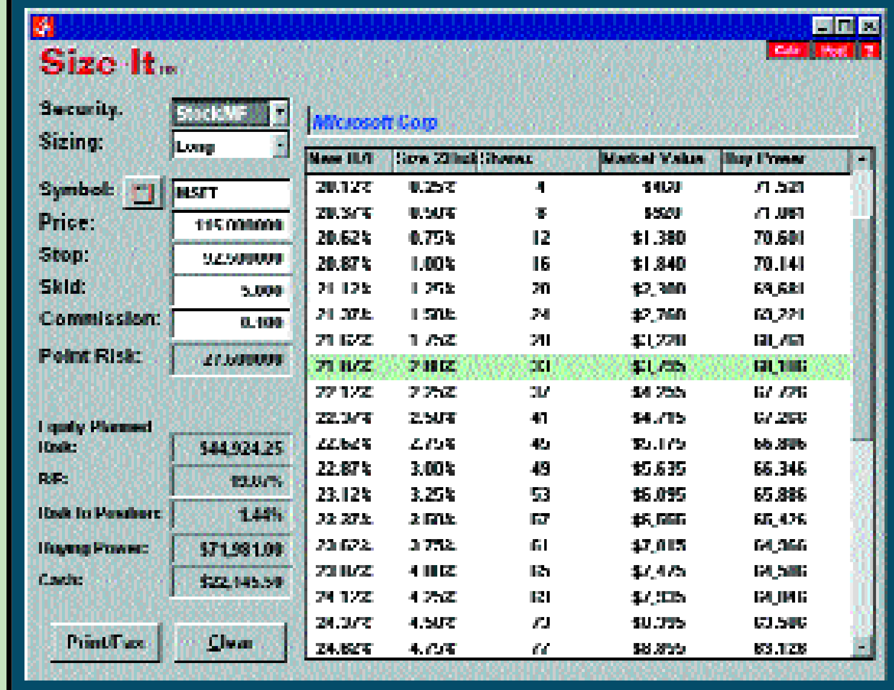


FIGURE 2 SIZING THINGS UP — MONEY MAXIMIZER SAMPLE TRADE

The Money Maximizer's "Size-it" tool calculates how many shares to trade based on risk relative to core equity.



price is hit you must take that hit.

If you find that your system is giving you stops that are constantly getting hit, then perhaps you should re-examine the rules of the system — but don't mess with your money! Second-guessing the approach will cause you to take on more risk than you planned, increasing the chances that a bad trading system will ruin you. Once your stop is gone, how will you know when to get out next?

Take your losses when they are small because if you don't they are sure to get large. In this regard, discipline is of the highest importance. It is a cardinal mistake not to take a stop if it is hit. It's even worse if the stock comes back and turns the trade into a winner because now you have been psychologically rewarded for making the mistake.

Get out quickly and re-assess the situation. If you think it will come back, put on a new trade with a new stop. Faith, hope and prayer should be reserved for God — the markets are false and fickle idols.

MONEY MANAGEMENT READING

Title	Author	Publisher, Date
Against the Gods: The Remarkable Story of Risk	Bernstein, Peter L.	Wiley, 1996
Market Wizards, The New	Schwager, Jack D.	Harper Business, 1992
Market Wizards: Interviews with Top Traders	Schwager, Jack D.	New York Institute of Finance, 1989
Money Management Strategies for Futures Traders	Balsara, Nauzer J.	Wiley, 1992
Quantitative Trading and Money Management	Gehm, Fred	Irwin, 1995
The Four Cardinal Principles of Trading	Babcock, Bruce	Irwin, 1996
The Futures Game: Who Wins, Who Loses, Why?	Teweles, Richard and Jones, Frank	McGraw Hill, 1987
The Mathematics of Money Management	Vince, Ralph	Wiley, 1992
The New Commodity Systems and Methods	Kaufman, Perry J.	Wiley, 1987
The New Money Management	Vince, Ralph	Wiley, 1995

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