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# Old Pros Size Up the Game

Thorp and Pimco's Gross Open Up on Dangers Of Over-Betting, How to Play the Bond Market

By SCOTT PATTERSON  
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About 50 years ago, a young math instructor at the Massachusetts Institute of Technology, Edward Thorp, created a strategy for wagering on blackjack that maximized winnings and effectively eliminated the chance of getting wiped out.

The strategy involved getting an edge over the dealer by counting cards, and never making especially big bets. He described the method in a 1962 book, "Beat the Dealer," then took on Wall Street in "Beat the Market."



Edward Thorp (left) and a now-famous follower, bond guru Bill Gross

Mr. Thorp ran two hedge funds, Princeton-Newport Partners and Ridgeline Partners, which went nearly 30 years without a down year, and averaged 19%-20% annual returns, he says.

One of his followers became Bill Gross, managing director of **Allianz** SE's giant bond-fund company, Pacific Investment Management Co., or Pimco. He read the books in college and still uses the risk-management techniques.

The Bear Stearns debacle shows that managing risk is more important than ever. Messrs. Gross and Thorp talked about risk management and markets -- and cards, of course -- in an interview at Pimco's Newport Beach, Calif., base:

**Wall Street Journal:** How did you get interested in blackjack?

**Edward Thorp:** I went to Las Vegas in 1958. I'd learned a strategy that would let you play just about even, so I decided to play with \$10. My \$10 lasted a lot longer than anyone else's at the table. I thought there had to be a mathematical way to beat the game, and that would be interesting mathematics. I figured it out and a few years later I wrote "Beat the Dealer."

**WSJ:** What about you, Bill?

**Bill Gross:** I picked up Ed's book in early 1966. I got in an automobile accident and had to go into the hospital and had time to practice the card-counting technique he discovered. And it worked! I had \$200, so I headed out to Las Vegas. I turned my \$200 into \$10,000. I didn't care about the money. I wanted to prove that you could beat the system. Then I thought about what I could do that takes the same skills. I realized it was investing.

**Mr. Thorp:** He started out with \$200 and now he manages nearly \$1 trillion.

**Mr. Gross:** "Beat the Market" was even more fortuitous -- it was the reason I got hired at Pimco, or what was Pacific Mutual Life then. I had done a master's thesis on convertible bonds and "Beat the Market." The people who hired me said, 'We have a lot of smart candidates, but this guy is interested in the bond market.' So I got my job because of Ed.

**WSJ:** What can your blackjack strategy tell us about how to manage risk in today's markets?

**Mr. Thorp:** You have to make sure that you don't over-bet. Suppose you have a 5% edge over your opponent when tossing a coin. The optimal thing to do, if you want to get rich, is to bet 5% of your wealth on each toss -- but never more. If you bet much more you can be ruined, even if you have a favorable situation.

**WSJ:** Your key risk-management strategy is known as the Kelly Criterion. What is it?

**Mr. Thorp:** It's a formula Bell Labs scientist John Kelly devised in the 1950s for maximizing the long-term growth rate of capital. It tells you how to allocate your money among the choices available, and how much to invest as your edge increases and the risk decreases. It also avoids the over-betting that can ruin an investor who otherwise has an edge.

**Mr. Gross:** Ed's basic thrust concerns the idea of gambler's ruin, where you lose everything by over-betting. In the context of blackjack, you can never bet more than 2% of your stake without the possibility of eventually losing your entire pot.

Here at Pimco, it doesn't matter how much you have, whether it's \$200 or \$1 trillion. You'll see it throughout our portfolio. We don't have more than 2% in any one credit. Professional blackjack is being played in this trading room from the standpoint of risk management, and that's a big part of our success.

**WSJ:** Bill, you've compared what's going on in the credit markets today to another card game: Old Maid.

**Mr. Gross:** In Old Maid there's a card nobody wants: the old maid. In today's marketplace, there are quite a few old maids. The ones America knows about are subprime mortgages. And they've spread to, for goodness sakes, the municipal market and sacrosanct areas that presumably are default-free. In Old Maid, you try to pretend to your opponent that you don't have the maid, and you try to entice the other side to pick it up. That is happening extensively in today's market.

**WSJ:** How do you know what's safe?

**Mr. Gross:** You don't always. That's why you stick to the highest-quality investments. We were recently a big buyer of municipal bonds, one-billion-plus. How did we know we paid the best price? We didn't. What we did know was that these are double-A quality credits that have very little chance of going bankrupt. We jumped in and crossed our fingers.

**WSJ:** What's your assessment of the state of hedge funds today?

**Mr. Thorp:** In the last 15 years or so, there has been a large flow of capital into the hedge-fund world, from \$100 billion in the early 1990s to \$2 trillion now. But the amount of available investing opportunities hasn't increased that much. That has led to the over-betting phenomenon Bill and I were talking about, or gambler's ruin.

Hedge funds started using a great deal of leverage to increase returns. But you can get wiped out if you bet too aggressively. A classic example is Long-Term Capital Management [the huge hedge fund that blew up in 1998]. We'll probably be seeing more of that now.

**Mr. Gross:** It's true that the available edge has been diminished, and that led to increased leverage to maintain the same returns. It's the leverage, the over-betting, that leads to the big unwind. Stability leads to instability, and here we are. The supposed stability deceived people.

**Mr. Thorp:** Any good investment, sufficiently leveraged, can lead to ruin.

**WSJ:** Bear Stearns is another example.

**Mr. Thorp:** Using too much leverage seems to have taken down Bear Stearns, though it doesn't seem that the Bear executives feel any sense of responsibility for bringing this upon themselves.

**WSJ:** Is there more leverage in the system now than ever before?

**Mr. Gross:** Goodness yes. The critical jolt came through housing, through the real economy, when homeowners became so overly levered relative to the equity in their home -- in many cases there was no equity, which is like super-leverage. Ultimately, some level of interest rates, or some level of caution by lenders to extend further credit, meant we were going down. Now we are finding out the consequences.

**WSJ:** With all of the dislocations in the market, are you seeing opportunities crop up, Bill?

**Mr. Gross:** Six months has changed everything. We bought double-A municipals at 6.5% tax-free, vs. 3.5% Treasuries. That's witness to the extreme dislocations in this market. Risky assets, non-Treasury assets, are getting repriced swiftly. Six or 12 months ago, we were despairing in terms of finding good opportunities. But now the opportunities are enormous, and we're looking for places to jump in.

**WSJ:** But you must feel a little nervous.

**Mr. Gross:** We're trading cautiously, staying with a high level of quality. We're not going into high-yield or the subprime market. Is there blood on the streets? Yes. But there are strong-quality assets out there.

**Mr. Thorp:** Fear creates opportunities. So as Bill was saying, this is probably a great time.

**Write to** Scott Patterson at [scott.patterson@wsj.com](mailto:scott.patterson@wsj.com)<sup>1</sup>

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(1) <mailto:scott.patterson@wsj.com>

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Sign up for a free account, use the welcome bonus to play Slots, and you'll see how the top new games offer nothing less than the old ones. One might argue that a professional gambler won't play Slots because Slot machines are not the Casino game with the best odds. And that's true. But it's no gambling secret that we all end up playing Slots at some point. So - if you want to try your luck at these machines, you better go for the best games out there. Not for some old, crappy ones! Superstition Will Damage You. It's up to them to implement procedures to halt this addiction if it's not too late. Mr. Howard Keith has an extensive background in dealing with compulsive gamblers, relatives and friends of gamblers and teenage gamblers. Mr. Keith believes there are many alternatives to aid in the recovery of a gambling addiction verses a twelve step program.Â Blackjack for Beginners 'Blackjack' is one of the oldest games played in United States of America. Generally it is believed that the game got its name from the manner in which it is played. Video Poker Variations Unlike many other more "social" casino games, video poker is more of a solo game. Gaming has come a long way since the days of Pong, Duck Hunt, and Pac-Man, when competing meant getting the top score at the local arcade. Electronic sports, or esports, describes the organized video game competitions (with cash prizes) that are quickly rising in popularity as more gamers become fierce pro competitors. Now pro gamers are competing around the world " some for winnings in the millions " at events such as the Major League Gaming (MLG) circuit, the International Dota 2 championship and Intel® Extreme Masters. MLG built dedicated arenas across the country to host and stream profess...