Peter Panholzer:
Currency system architect

2004 has been a rough year for currency traders, but more than three decades of trading has given DynexCorp's Peter Panholzer a philosophical outlook on the market.

BY MARK ETZKORN

Forex might be all the rage in the trading industry these days, but most individual traders have begun to take note of the world's largest market only fairly recently.

Peter Panholzer, head of trading and chief investment officer at DynexCorp and Panholzer Advisory Corporation (PAC), which together manage $53 million in the forex market, has been trading the currency market professionally since the late 1970s. He was currency before currency was cool.

Panholzer was something of a trailblazer, having started managing money exclusively in the currency market at a time when common wisdom dictated doing so was a mistake because of the lack of diversification. Also, he was an early practitioner of systematic trading, which was a relatively novel concept in currencies at the time.

Panholzer, 61, who became a Canadian citizen in 1977, grew up in Vienna, where he earned a master's degree in architecture from the Technical University of Vienna. This seemingly unrelated focus of study actually served his future career choice well.

"I have a mathematical background," he says. "In Vienna, the education for architecture is not just artistic, there's a lot of engineering involved, and therefore a lot of math. I acquired my programming skills myself in the early 1970s."

Panholzer worked as an architect for six years in Toronto, and he co-designed some award-winning buildings in Canada. But when contemplating going solo, some of the inequities of his profession got under his skin. His decision to try trading was the result of his belief in "objectivism, the philosophy of Ayn Rand (*author of the books* Atlas Shrugged *and* The Fountainhead) that effort and talent should be rewarded," he says. "Unfortunately, in architecture, talent and effort are not, in most cases, rewarded. A bad architect who was a good businessman would be the richest architect you could find anywhere."

Panholzer continues. "Yes, there are some excellent architects — Frank Gehry and, in Canada, Arthur Ericson come to mind — who probably have been enjoying the benefits of Ayn Rand's philosophy in the truest sense. There you have two great talents who, like Frank Lloyd Wright, reaped the financial rewards of their talent. But there are great architects out there who are not rewarded accordingly. That bothered me.

"In trading that's not the case. In the markets, you get rewarded — or slapped in the face — immediately."

Although 2004 has so far been a slap in the face for DynexCorp and most other currency funds (see Figure 1), Panholzer has mostly been rewarded over the 25 years of his trading manager career. DynexCorp's TETRA trading program was down roughly 15 percent this year through September, but Panholzer has had only three losing years since 1994 and DynexCorp was the No. 1 currency manager in 1998 and No. 3 overall from 1994-1999, according to the Managed Account Report's rankings of risk-adjusted returns.

Panholzer began his market career in 1973 trading silver. He started trading currencies for his own account in 1977 and with such success that he began managing money in currencies exclusively in October 1979. He's been doing it ever since.

In 1979 he joined the Toronto branch of ContiCommodity Services (Canada) Ltd. as an account executive. He transferred to the Lugano, Switzerland branch office in 1981.

Between 1979 and 1984, he ran the Magnum Currency Program (using currency futures contracts at the Chicago Mercantile Exchange) at Conti, which produced an average annual return of 80 percent in its first three years.

After four more years at E.F. Hutton in the mid-1980s, he struck out on his own, founding PAC in 1988, to specialize purely in foreign exchange spot trading. Since 1992 he has lived in Monaco.

DynexCorp handles institutional business, which consists mostly of banks outside the U.S., while PAC, which has an American office and is NFA and CFTC registered, handles individual and small corporate clients.

The funds are traded in strict systematic fashion using Panholzer's TETRA trading program.

"I didn't start trading a strict system until 1979, which at the time was a fairly new approach," he says. "And the attitude was trading currencies exclusively was a mistake because you weren't diversified enough."

"We essentially have three traders looking after the signals," he continues. "There is no discretion. They all use the algorithm that delivers the orders, which is very convenient because even a person who doesn't know how to trade can internally monitor the program."

Panholzer's belief in systematic trading is based on two principles familiar to most mechanical traders: testability and objectivity. But he makes a distinction between "system trading" and "technical trading systems."

"System trading is different from technical trading," he says. "In technical trading, you're reading tea leaves — the indicators. Interpretation of technical indicators is often subjective and not programmable. But you can program a system."

Panholzer sometimes sounds like a typical "quant" — talking about the trading in terms of distributions and other statistical concepts — but he also has a somewhat quirky sense of humor (which he occasionally uses to deflect inquiries into more specific aspects of his trading) and, like any good money manager, a talent for changing the subject. When asked what he thinks he does differently from other currency

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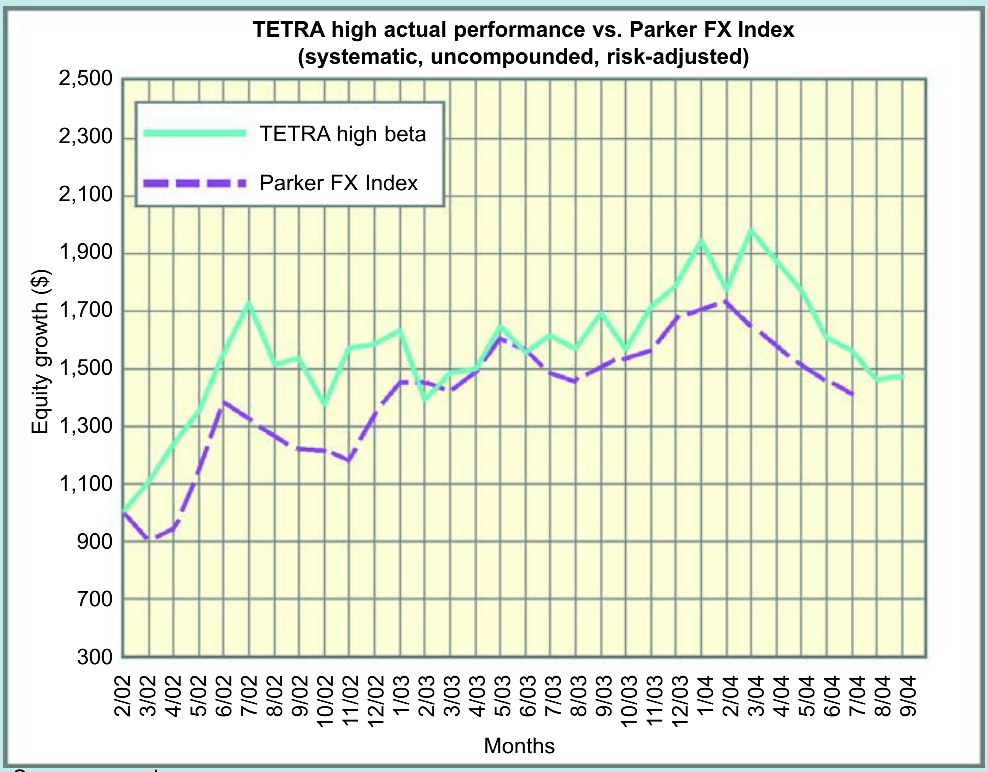
FIGURE 1 — RELATIVE PERFORMANCE

This equity line dating back to early 2002 highlights Panholzer's performance vs. the Parker FX index and the steep drawdowns he and other currency managers have experienced in 2004.



Source: www.dynexcorp.com

The 1970s were unprecedented inflationary years. If that happens again, trend-followers will have some tremendous advantages.

traders, he replied, "I do everything differently from other currency traders. The only thing that connects currency traders is that they never seem to sleep."

AT: *What were your trading experiences in that period from 1973 to 1979? How long did it take you to develop your systematic approach?*

PP: It took me from 1973 to 1977 — that's when my trading blossomed and I started to make oodles of money. It takes four years of tuition in any endeavor in life. If you want to learn golf, tennis, piano, a language — it always takes at least four years, doesn't it?

But before that I didn't make money — I made it, I lost it. I survived. But that's normal. Whatever I lost, I considered tuition.

AT: *How did you initially approach the markets?*

PP: I've been a contrarian since 1972. The figures published by Market Vane (Sibbet-Haddady) started in 1972, and ever since then I've been following them. But then to apply that information, that takes insight, too.

So when I say it took me four years of learning, that includes learning contrarianism. All the money I made before I started system trading was through contrarian trades.

AT: *What's an example of the kind of trade you might have used in this regard?*

PP: Take sugar, for example. After running up from 6 cents to more than 60 cents throughout the early 1970s, it had just collapsed back to 6 cents. Everyone considered it a bargain, of course.

Well, contrarian thinking taught me to go against "everyone." I went short at 6 cents and everyone thought I was nuts — until I cashed in my profits at 4.5 cents. In relative terms, a move from 6 to 4.5 is huge. Nobody thought that way, but it's a 25-percent drop, after all.

The following winter (1978) I holidayed in Mexico City, but, in true Jesse Livermore fashion, instead of visiting monuments I hung around brokerage houses and got to talk to a Mexican client who "confided" to me that his brokerage had lent him the required additional margin for his short cocoa contracts, which were then trading at 89 cents/pound. "We don't want you to close out your position and let some gringo profit from your losses," they had told him.

To me that sounded like a starting pistol. I immediately called my partner in Toronto and asked him to go long six contracts of cocoa in my account. It was a bumpy ride all the way up to above $2 when I took my profit.

AT: *What ideas did you go through in that period that you ended up casting aside?*

PP: Econometrics — what we might call one step ahead of fundamentals — didn't work for me. For example, at our firm we had a curve that showed the average weekly movement of pork bellies in and out of warehouses. That has a seasonal pattern — it goes up around Easter, down in the summer and increases in the winter. You can average that over 20 years and get a smooth curve.

Then I compared the actual movements against the 20-year average to determine what that would mean in terms of a move in pork belly prices. That idea makes a lot of sense, but it doesn't work. This is what led me to the numbers game.

AT: *Is "the numbers game" what most people would consider technical, quantitative or statistical?*

PP: Completely statistical. I do not believe in technical indicators *per se*, although some people use them as a tool — and there's nothing wrong with that. Let's say you have a hammer. If this hammer suits your hand particularly well and you can hit a nail right on, that's a good hammer for you. For me, system trading is a good hammer.

AT: *Is it fair to say that whatever you use has to be testable?*

PP: Certainly. A lot of research goes into the stability of parameter spaces — which are ranges of system parameter values across which you want performance to be consistent as markets evolve.

But I think the most important thing I've learned in the past 25 years is that if you delegate trade execution to someone else, you're more likely to succeed. I'm purely systematic. We now have what we call a "robot interface" with one broker. That account has no interference whatsoever. No resting orders are placed in advance, so the broker doesn't know the robot's "intentions."

We prefer not to show our orders. I believe in that in principle. If a broker sees the order, there's always the argument that brokers [execute] where the orders are bunched up, for example. With the robot, the order sits on our computer server and the broker doesn't see it. The moment our server sees the trade trigger, it executes at the market with the electronic broker platform.

AT: *That sounds like a good idea for individual traders, too: Instead of placing limit orders, place the trade as a market order when you get a signal from your system.*

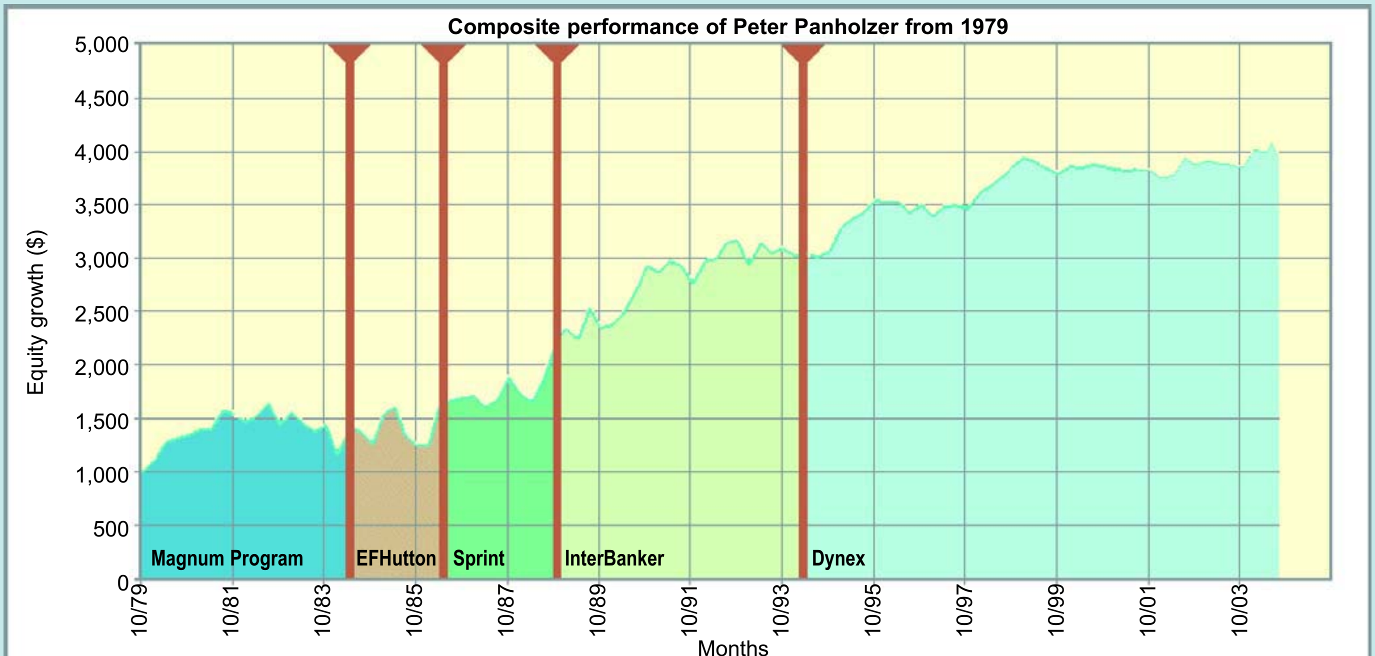
PP: Yes, of course. All I can say is, in all likelihood, this is the best way to execute a system. Second-guessing it is the biggest danger.

AT: *What's the TETRA program?*

PP: It's the program applied in most of the funds we manage. We started it in January 1998.

FIGURE 2 — THE BIG PICTURE

Panholzer's career dates back to the late 1970s, when he initially made his mark with the Magnum Currency Program.



Data are normalized to reflect 1:2 leverage throughout without reinvestment of profits (quarterly, not compounded)

Source: www.dynexcorp.com

AT: *Is it a trend-following approach? How does it work?*

PP: It's a hybrid system. A trend-following system normally has some kind of sliding protection — something that keeps moving with the market; that's how you follow the trend. We have a hybrid because we use both profit targets and sliding protection, in a systematic way.

We use four-hour (*the primary time interval*), hourly and daily data in the TETRA program. These intervals are not being changed. Some researchers, such as Richard Olsen (see "Richard Olsen: Tuned to high frequency," *Currency Trader*, Oct. 2004 p. 42), have found you can use "tick time" — that multiple hours of trading activity can be compressed into one hour, for example

A system consists of three things: Entry mechanism, exit mechanism and then re-entry mechanism. If you don't have a re-entry mechanism, you have no system.

AT: *How did you determine these time intervals? How long a process was it?*

PP: It was a process covering years of research and hard toil.

AT: *This year has been pretty rough overall for currency managers, and currencies have been stagnant for a while. Let's talk about the evolution of online forex brokers. As this market grows, what do you think of the potential profit opportunities? Will the trend moves continue to dissipate and will that make it harder for currency managers to make money? Is a sea change in the market occurring?*

PP: I've been around long enough to know that it's not new. But on the other hand, the market is changing with regard to the distribution of prices. We know that market prices are not normally distributed, meaning there are sharp moves that don't fit the normal distribution pattern — these "fat tails" in a non-Gaussian (*bell*) curve. This tendency is increasing, in my opinion.

All system trading ultimately relies on near-normal distribution. When this deteriorates, you have less opportunity for systematic trading. Things will be more difficult for system traders, and fundamental traders who have a view about price levels might come to the forefront.

On our Web site there's a comparison between systematic and discretionary currency managers — how they underperform and outperform each other. It shows that, currently, discretionary are ahead of systematic traders. If that will persist, I don't know. I should like to think *not*.

AT: *If it does, how would it impact your trading?*

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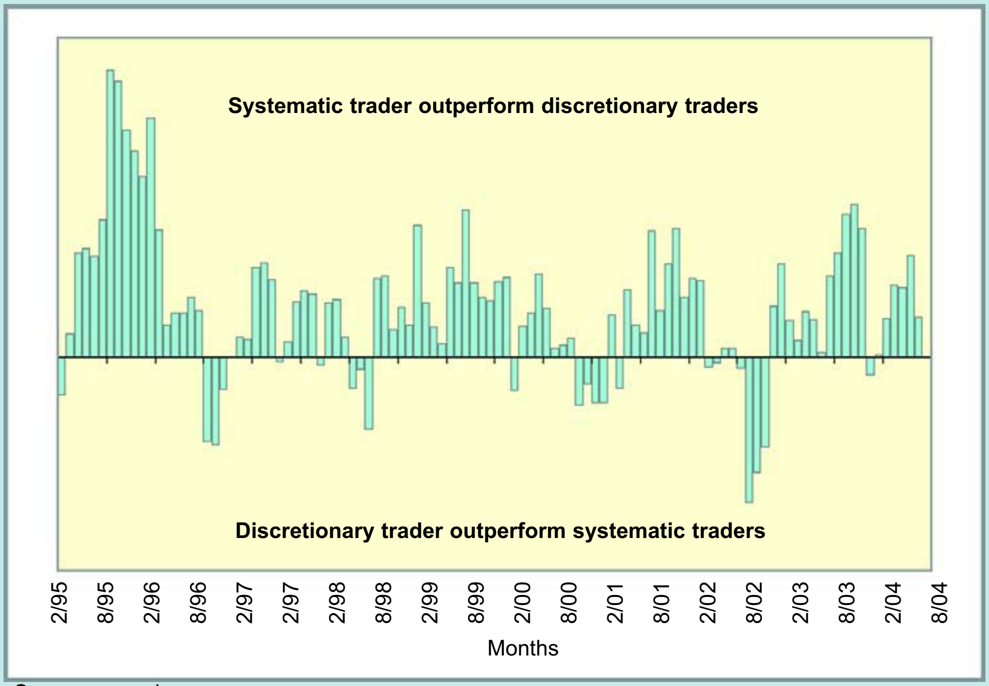
You should always use less leverage than you think you should, because we always overestimate our risk tolerance.

FIGURE 3 — SYSTEMATICS vs. DISCRETIONARY

Although systematic currency managers have outperformed their discretionary brethren overall, Panholzer notes that lately discretionary traders have had the upper hand.



Source: www.dynexcorp.com

PP: It's not going to. But we have to be more careful with the fine-tuning of the parameter spaces and be on the button with regard to monitoring how systems perform in general and how other traders perform.

AT: ***It wouldn't lead to shortening your trading horizon, decreasing your size or some other change?***

PP: No. We are very happy with the current model. We don't, generally, reduce the position size if we lose money.

AT: ***So when you talk about adjusting parameters depending how the market evolves, what are you talking about changing?***

PP: The parameters we change are "buffers," which adjust to market volatility. But we tend not to change them, if we can avoid it.

AT: ***Are the buffers essentially volatility-based filters that dictate how much a market has to move after an initial signal is triggered before the signal is acted upon?***

PP: Yes.

AT: ***What's an average trade length?***

PP: Two days.

AT: ***Is forex a unique market, in that trading currencies is different than trading stocks or bonds?***

PP: Currencies don't "scale" like other assets. Stocks, bonds and other asset prices scale logarithmically (*i.e., on a percentage basis*). What I'm saying is, the daily volatility of, say, soybeans trading at $12 will be higher than it would with beans trading at $3. It moves in percentage terms according to the price level. That's normal.

I checked the average daily range or volatility of the British pound when it was trading around $1 vs. when it was around $2 or $2.50 and, funnily enough, there was virtually no difference in the daily volatility. It should have been half when the pound was trading at $1 vs. where it was with the pound at $2, but it wasn't.

This is probably because currencies are reciprocal — you could say there's a pound/dollar rate and a dollar/pound rate. By contrast, gold bullion is measured in dollars, but you never measure dollars in gold bullion.

One thing's for sure: Currencies do not fluctuate more when they are at higher prices — at least as much as they should.

The medium of currencies is not comparable to the bond and stock markets, in which you have indices people can buy — a portfolio of bonds or a portfolio of stocks, like buying all the stocks in the S&P 500 — that serves as a benchmark. You can't do that in currencies.

Sophistication is not the solution. Sometimes the simplest system will be the most useful because it easy to understand and execute.

AT: ***I read you only trade the three largest currency pairs (EUR/USD, USD/JPY and EUR/JPY), but you also have a study that discusses the superior trend characteristics of less mature currencies. If some of these less mature markets have better trend characteristics — even if they're less liquid — isn't there enough price movement to justify doing some trading in them?***

PP: The risk is just too big. Everything is fine and dandy on paper, but simulations don't show everything — you find out there was a 50-point market gap that wasn't factored in because most people work with hourly data, at best. Even if you had one-minute data, even then you wouldn't even necessarily spot a "liquidity black hole" (*a term created by Prof. Avinash Persaud*). We've seen liquidity holes occur in time spans less than one minute. So even if you make a one-minute chart, the gap doesn't show up.

And this is a risk that has increased recently in my opinion — I've never seen so many liquidity holes, particularly in the dollar/yen rate.

AT: ***Are there any currency pairs you are currently not trading but are watching because they are poised to become mature enough to trade?***
PP: No.

AT: ***Also, do you think some of the less mature currency pairs are viable for individual traders, who don't have to worry as much about huge liquidity?***
PP: Sure. You can choose between many models when you buy a car.

AT: ***You seem to feel the Bank of Japan is especially responsible for the liquidity holes you talk about — you've even referred to their "manipulative moves" on your Web site. Why is that?***
PP: The Bank of Japan simply has more discretionary powers than other central banks.

AT: ***What basic principles would you advise forex traders adopt given today's market?***
PP: After all my 31 years of trading, I've come to say that the best way is to trade systematically — in an unemotional way — and that can only be done using very rigorous system construction and exploitation of data statistics. You can do this as an individual trader, but it takes a lot of resources.

You can't buy a good trading program, in my opinion. We certainly wouldn't sell ours. The program has to fit you like your own clothing. In that sense we have a tailor — that is, a programmer who is, ideally, himself a trader — and we work together with him to develop and monitor the systems. This is Adam Hartley, of SnapDragon Systems in Oxford, England.

I also believe simple rules, amazingly enough, make the best systems; complex rules don't, necessarily. A complex rule, for example, would be the application of chaos theory. Rocket scientists were given millions of dollars to research and trade using fractals and non-linear dynamics, and they failed.

Sophistication is not the solution. Sometimes the simplest system will be the most useful because it is easy to understand and execute — the Turtle system, for example, or the very similar system I used long before the Turtles. (*"Turtle" was the name given to the trend-following disciples of trading star Richard Dennis, who made hundreds of millions of dollars in the 1970s and 1980s.*)

Decades ago I used a four-week breakout system (*buy at the four-week high and sell at the four-week low*), and that turned out to be the Turtle system, except the Turtle system entered at four weeks and got out at two. Obviously it was very useful in very trendy markets in the 1970s when there was inflation. That's another thing: The 1970s were unprecedented inflationary years. If that happens again, we'll have some tremendous advantages. What you need is movement. Right now, there's not so much in the currency market.

AT: ***If a general deterioration of trend moves is inevitable — not just cyclical — doesn't that eventually spell doom for currency trend followers? Wouldn't you eventually have to adopt a different approach?***
PP: Currently these clouds seem far away. As [Former Canadian Prime Minister] Pierre Trudeau once said to an old lady who asked him about inflation, "The universe will unfold as it must."

AT: ***Do you have any feeling about currencies over the next six months or so?***
PP: I think 2005 will be a banner year for currencies. I also have a strong feeling the remainder of the year will show a strong improvement in conditions. There seems to be some kind of seasonality that October, November and December tend to be good months. But of course, that could be called witchcraft (*laughs*). Nevertheless, the statistics are there to show the last quarter is good.

> 2005 could be a good year in currencies because when you come out of a long sideways move, in general, you often get a big move. This is natural.

AT: ***Why is 2005 going to be good?***
PP: Because when you come out of a long sideways move, in general, you get a big move. This is natural.

AT: ***Do you think the high leverage sometimes offered by forex brokers is a good thing for smaller traders to use?***
PP: I think it's irresponsible to trade with only the margin money — in the spot market or in futures. But the exchanges and brokers have an interest to let the little guy trade with as little money as possible — the margin. It's not in the interest of the trader. It's in the interest of the broker because it creates more commission per customer dollar.

All I can say is, in currency trading leverage is a very important thing. You can use no leverage or 100-to-1 leverage. And in general, you should always use less leverage than you think you should because we always overestimate our tolerance for risk.

We don't always understand that risk isn't always a money risk; there's the risk of regret. Sometimes you regret you haven't been in the market, sometimes that you got out too early or that you've taken a loss when it wasn't necessary. It's not only the money we worry about, it's also our regret we worry about.