

INTERVIEW

Evolving With The Times

From Biotech To Quant With Scott Andrews

Scott Andrews is cofounder and CEO of InvestiQuant (www.investiquant.com), a financial services company that uses robust historical market analyses and predictive analytics. Prior to InvestiQuant, he cofounded Master The Gap and SciQuest, which he took public as CEO. He has an MBA from the University of North Carolina and served as an aviator in the US Army after graduating from West Point (USMA).

STOCKS & COMMODITIES Editor Jayanthi Gopalakrishnan spoke with Scott Andrews on April 4, 2016 about the importance of having automated trading strategies.



Scott, tell us a little bit about yourself and how you got interested in the financial markets.

I was fortunate to take a company public at a pretty young age in the 1990s. I went to West Point. I was in the Army for five years and after that worked as a sales representative for a medical supplies company. This was in the early '90s, and the Internet was just starting to be used by my customers, who were scientists doing research. They introduced me to the Internet, and that's when lightbulbs went off for me.

I was in business school at University of North Carolina and I could see where it was all going. I started a little company to help scientists better find and procure laboratory supplies, chemicals, and antibodies. The business took off. We took it public, and I was the CEO for a few years. In the process of taking the company public I had a front-row seat of how the financial markets work, which was interesting to say the least.

That must have been interesting.

It was a fascinating experience. It was all that I expected it to be and a whole lot more. But I really did get to see some of the disconnects first-hand between the fundamentals driving company valuations and technical price action. It was always fascinating to me how our stock price would ebb and flow in ways that had

nothing to do with any change in our fundamentals, good or bad. I've always been interested in the market even from my days in the Army. After I stepped down from my position as CEO, I had a little time and money. It was a natural transition for me to go into the markets and try to manage my own capital by trading the market.

You said you saw the disconnect between fundamentals and technicals. What are some examples of this disconnect?

We were a public company trading on the NASDAQ. We would release earnings every quarter. I had never really studied or watched just a single market before, but because I had so much personal stake in the company, I would keep a close watch. I saw price action make significant extremes, both up and down. I would see significant price swings in anticipation of earnings at times and sometimes even after the earnings information was out. Mind you, we went public in November 1999, which was a crazy time in the market.


This was during the big run up to 2000. In fact, we were doing the secondary offering in March 2000 when the market peaked. I was on the road every day trying to raise money from investors around the country. Our stock prices were dropping



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to the likes of four dollars a day because that's what was happening at that time in the markets.

The market topped out. It didn't matter what we thought. We were a small company with an interesting business. We were trying to be a private marketplace for pharmaceutical companies and biotechnology companies. The company had a crazy valuation. People would ask me to defend our valuation, but that wasn't my job. It was tough to wrap your head around the valuations at the time. There seemed to be very little rhyme or reason for the valuation of our company on the positive side, or even when it reversed and went back down, for that matter. Fortunately, we were one of the survivors. We had a real company with a real business. And the company still trades on the NASDAQ



What I've found is that the most important thing is trade selection.

today (SciQuest, Inc.). I'm proud of that because not many of those dot-coms survived.

You must feel fortunate that you were actively involved in the markets during that time so you could see the good times, as well as the bad, in a very short period of time.

Oh, yes. When I was in the Army, I didn't make enough money to trade. I had a little combat pay from Desert Storm and I invested that and proceeded to lose just about all of it. But I had never watched just one instrument or symbol trade in the markets, as I did with my own company's stock. What surprised me was that even though we were a small company, the price could be so volatile. I was shocked, quite frankly, at the extreme movements. That's what I found so interesting, because it seemed like a good opportunity to look for the reasons behind these moves. That got me interested, and I was fortunate to be in that position.

And now you own a company named InvestiQuant. I assume from the name that you apply quantitative strategies to your trading. What was it about quantitative versus discretionary trading that you found attractive?

I started off as a discretionary trader. I was trading options initially and looking at pure technical price action and analysis. I hired a guy who was more of a mentor, someone who looked at leading price action, used multiple timeframe analyses, and used some traditional, conservative analyses. He was fantastic. He was a guru and did everything by the book. He taught me his methods, and after a year and a half into trading, I was fortunate enough to have made money. But unfortunately, I gave most of it back in just a few months during my second year of trading. I came to the conclusion that, at least for me, and this

may be the case for many, it's very difficult to discern random results from skill.

I was trading with short time frames on the charts. But what I thought was skill, in retrospect, ended up being mostly random

good fortune in the market. The markets were generally going up and I was trading to the long side, so I was just trading in the direction of the market. When the markets stopped going up and started going sideways, my strategy stopped working. There was too much randomness and I realized that it really depended on market conditions.

I'm certainly not a math whiz but I've always been interested in math. Math makes sense to me. I like the certainty that comes with math. So I started studying the techniques I had learned from these patterns. I hired a friend who was a developer to help me program these techniques, and I was shocked to find out that virtually everything I had spent the last 15 months learning had no overall edge. There was no statistical advantage to what I was doing. What I found was that the patterns everyone thinks are right only worked in certain market conditions. That, for me, was a big "ah-ha" moment. It was a big wake-up call telling me that I needed more certainty.

At that point, I was "damaged goods" emotionally and didn't trust anything about the market. I started studying the markets and trying to find setups that seemed to have some type of an edge, regardless of market conditions. That's what led me to focusing on the opening gap.

Let's talk about that opening gap. Are there certain indicators you look at to identify which stocks or gaps to trade?



After realizing that market conditions were the key to success, I got rid of most of my indicators and changed my approach. I threw away most everything I'd learned and read, and I decided that I needed to figure this out on my own.

You started on a clean slate?

I just had to. And I was really fortunate because I had a little bit of time and money, which a lot of people don't have when they enter the markets. I downloaded historical data from Yahoo! Finance for the Dow Jones Industrial Average (DJIA) and started studying different things. One of the things that caught my attention was the existence of gaps. I was interested in following the gap, as many people are. I thought that going in the direction of the opening gap would set up a good opportunity when you get a big breakaway gap.

Ultimately, what I stumbled on was—and many people know this—that the DJIA has a mean-reverting bias. It takes something extremely unusual to sustain an opening gap all day in the indexes. I realized that approximately 70% of all opening gaps will fill the same day they're created and the opening price will manage to work its way up or down back to the prior day's close. I liked that inherent bias, that edge, and the confidence it gave me. So I started focusing only on indexes.

I had done a lot of work on stocks as well, and they work well as long as you're not trading the momentum stocks. I focused primarily on indexes. I don't look at stocks. I just wait until good technical setups occur in the markets like the S&P 500, and I trade primarily futures. I did all of my research on the underlying ETFs and futures. The results are virtually identical.

I primarily trade S&P 500, NASDAQ, and Russell futures. So to answer your question, I don't use any indicators. But what I've done over the years is to look at a number of key considerations for the opening gaps. Gap size is probably my biggest concern. I look to see if it's generally a small gap or a large gap, and which direction it's going. I then compare it to my database of historical results for a wide range of market conditions.

I don't think of myself as a system trader, but I do use systems. I have evolved to a point where almost everything's automated, but that's only been in the past year. During the past decade I was trading manually. But even with my automated systems, I'm not doing anything super-fancy, because I don't think you need to. It's better to keep it simple. I do break down the markets in a number of different, varying ways. All of them are lowly correlated, and I'm looking at different ways of defining market conditions, trend, momentum, volatility, overbought, and oversold. I pay attention to all these things in the context of gap size and direction.

Let's just say, for example, that there was a large gap up today. My database would show me how large up gaps have historically performed under similar market conditions. I'll look at all these different scenarios and if most of them show that it has been attractive and profitable historically, I'll trade it. And if they don't, I won't. It's pretty much binary.

How long, on average, do you hold onto your trades?

I'm primarily an intraday trader trading the gaps, and I also trade opening ranges. If I don't have a gap trade, I will trade a 15-minute or 60-minute range to break, whether it's high or low. So, by definition, all those trades, the gaps, and the ranges average about an hour and a half or so, maybe two hours. In the past couple of years I have traded some overnight positions and have started to dabble in swing trading. But I have been applying the same quantitative approach.

What I am hearing is that you keep things simple and also just focus on certain indexes. But because you focus on the indexes, you get a broad look at the markets. Do I understand this correctly?

Yes. I used to chase trades. I would chase markets, chase opportunities, and look for what was setting up best and then try to trade it. Although there's nothing wrong with doing that, my results suggested I was better off being patient. That's because, in general, stocks are highly correlated with the indexes. So if

you get a good gap trade on an individual stock, most often, it's also a good setup for the overall index.

When markets get too stretched in a given direction, mean reversion is likely to kick in. I found that instead of wasting time and effort, it was just better to focus on what's driving the market, which is generally the bigger indexes representing the market. It's relaxing to wait till the market is set up. I used to feel like I was missing out, but I don't feel that way anymore. I let the good opportunities come to me, and when they come, I trade my plan and simply accept the results.

Considering that gaps tend to revert to the mean, or fade, do you look to short if you see an opening gap up?

Exactly. If the gap is up, I look to short it to target the prior day's closing price. If the gap is down, I'm looking to fade the open, which would lead to buying the down gap, and again target the prior day's close. It may go up a little bit more or just in front of it, but 80% of the time, I'm just purely targeting the prior day's close. I enter with market orders, which is something that's usually discouraged.

Yes, it is often discouraged. So why then do you enter with market orders?

If you think about it, say there is some good news out prior to the market open, and it creates momentum in the market, causing it to gap up. Price action looks like it's ready to take off and it tends to suck in a lot of different types of buyers. I don't know if they're emotionally driven buyers or buyers who are not concerned about how much they pay for a stock because they are trading longer timeframes. Many of these buyers want to get in because the news was legitimate, it was good news, and they want to be long in the coming days, weeks, and months.

If they fade the gap, it's perfect for me because I'm looking to short using a market order. It is not unusual for me to have positive slippage, meaning that if I am trying to enter at 9:30 am ET with

A human emotion such as the desire to make money tends to overwhelm the senses. It lends itself to making bad judgments and losing the true sense of reality.

a market order, I am often filled with an even better price than the actual open. That's because there's so much buying interest at the open and with a market order, I get a better fill. But that's not the key to my success. I've been placing market orders for over a decade and am comfortable with them. Sometimes they're the right thing to do.

You say you look at the prior day's close. Is that what you use as a support level to exit your position?

Yes, that's what I use. I also use other things for targets such as primary pivot levels. The prior day's close is sort of my "go-to" target. I like to try to think that discipline is an advantage for me over other traders, so I have to have everything preplanned. I also need a high win rate, which is more of a psychological need than a statistical need.

Ultimately, the win rate for your strategy should not matter. It's all about the *expectancy* of the strategy, which is how you should measure whether or not you trade a strategy, and how aggressively you trade. If you have a long-term, proven edge with a mathematical expectation of making a profit, then technically, you should make a lot of money even on a low win rate strategy. But for me, the reality is that if I have a low win rate, I'm more likely to tinker with the trade, and start adjusting targets. And if I get into a series of losing trades, I'll start reducing or changing my position size. So I start doing all these little things that undermine the long-term performance of the strategy. I generally create and focus on strategies that I think I've got at least a two-thirds chance of having a winner. What that means, if you think about it mathematically, is that if you have a 65% chance of a winner over the

I've learned the hard way that you've got to get emotions out of the way. And the best way to do that is to become a purely rules-based trader.

course of 100 trades, odds are extremely likely that you will not exceed more than five consecutive losses, which is a lot, but it's manageable. Once you start getting into six, seven, or eight losses in a row, I don't care how smart you are, most people start struggling with those types of strategies unless they're completely automated. But most people do not use completely automated strategies and they end up struggling.

Do you manage your positions by looking at the expectancy?

Absolutely. Everything is predefined, so before I enter a trade, I've already calculated what I believe would be the odds of that trade being a winner. I know the average expected win size because I know where my target is and I know how much I'm risking. I only enter the trade if I believe it's got a compelling expectancy. Once I'm in the trade, there's nothing else for me to do. I admit that I've done my share of adjusting and tweaking positions over the years, but I've also tracked my results, and if anything, doing that has cost me money over the long term. It hasn't cost me too much, though, because I'm not trying to actively manage positions.

After many years of trying to think that I was smarter than the market and smarter than my research, I realized I wasn't. I've studied most of the basics such as Fibonacci levels, pivot points, and various other techniques for helping me identify optimal targets. What I've

found is that the most important thing—and this is a good tip for readers—is *selection*.

There's way too much emphasis on trying to optimize the target or your stops once you're in the trade. Doing that is much harder than you realize. You're better off taking that time and pouring it into your trade selection efforts.

That's what I did for my gap trades. I merely trade the opening gap five to seven times a month for a given market. Most of the time, there're no gaps to trade.

Since you trade the opening gaps, do you find yourself not trading often?

I used to, but I've evolved. Since I trade gaps on the Russell, NASDAQ, and S&P 500, it's now less common for me to not have a gap trade. I could have a trade on the NASDAQ but not on the Russell or S&P 500. If I've done all my homework, what'll happen frequently is that the markets will be on the fringe of having a tradable gap, and I get very close to pulling the trigger. It's been frustrating over the years because the index will just be on the line for showing a robust-enough of a setup but I would walk away. Now, instead of walking away, I use that same knowledge and information to evaluate the 15-minute range price action.

So even if I do not trade the opening gap, I may have a good setup occurring on the 15-minute range price action. In that case, I will enter and capture some of

those gap winners, and if my analysis is correct and the data is setting up to break away today, I'll trade in the direction away from the gap with my 15-minute range analysis support levels.

What's the biggest challenge facing new traders?

I think the trading industry suffers from too much unnecessary information. Of course, I am biased given that I've been trading for 12-plus years. You have to know how to read charts, but don't spend two years learning how to interpret charts. Instead, spend two *weeks* learning how to interpret charts, and then get into understanding what drives the markets. Create trading rules and then trade them. I am a disciplined person but I still have emotions as much as anyone. I've learned the hard way that you've got to get them out of the way. And the best way to achieve that is to become a purely rules-based trader and not use charts to make trade adjustments.

I don't think there has ever been a better time to be an active investor or trader. Big data, cloud computing, and predictive analysis are rapidly leveling the playing ground between Main Street and Wall Street. In fact, I believe that for the first time, the individual trader has access to institutional-quality tools and research at an affordable price. And that means that the serious, well-disciplined trader should be able to generate returns that are comparable to or even better than the best funds year in and year out. Of course, the key is to have a real edge. For most traders, I believe that focusing on trading with history on their side is the edge that they need for consistent success. If you can do that, then just about anyone can make money in the market.

Thank you for sharing your thoughts with us, Scott.



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