There is the Sell side and the Buy side of the market. The Sell side does research on companies, builds financial models, and picks the winners and losers. The Buy side works with clients and buys stock (pension or mutual fund).

Within the Sale side there are equity researchers, technical analysts and software engineers.

**Equity Research** - they examine where the revenues are going and the price/earning ratio. It is very data driven. A lot of PhDs are equity researchers.

**Technical Analyst** – this is someone who examines behavioral finance or how people react to the market. They look for patterns rather than actual data. They publish research for clients every Monday and Wednesday and that has to be released before 6am so you might have to work on Sunday nights. There is a 7am meeting everyday.

**Software Engineer** - has meetings with R%&D and stakeholders. You do not need to know how to write much code. Mostly they need good problem solving skills. As a PhD, you may become a manager and have developers working for you.

There are big companies and small firms and each “shop” has its own culture so get to know what the environment is like at the company you are applying for. They look for a good fit personality-wise with their employees.

As a managing director in equity research, you have to be able to talk to a lot of people (~300 phone calls/month) and travel a lot to conferences as well go on field trips so clients can visit different companies. You might be on the road up to 150 days a year. Every marketing meeting that you present at is like a thesis defense and you have to prove your case.

As an analyst you will likely have to work long hours and they are looking for very rigorous results.

Many associates these days have MBAs in addition to the PhD and they will pay for MBA or CFA once you are hired. They may also send you for public speaking and media training courses.

Starting salary might be $150,000 with a $25,000 bonus.

**Advice for applying for a job in the financial area**

They get about 50 applications per week. Make sure your cover letter and resume are tailored to the job you are applying for. They only spend 1 min on each resume and are looking for keywords. Make sure it is not more than 1 page.

Networking is important to meet people in the field. If you don’t have the exact skills then go to
a career fair since you can make an impression in person. Sometimes the firm wants people who have very little financial experience so they can learn the boss’ methodology.

First you will have a phone interview and then an in person one. You might have to do a writing piece during the interview (speed writing.) You might also have a take home task of writing a 3 page summary of NIH finding and historical trends, for example. You might also have a financial modeling test where you have to fill in the blanks and forecast what will happen. You might have to pitch a stock to the person who is interviewing you. You should know what the stock price of the company you are interviewing at is. You should also know facts about the company: who the CEO is, why a specific date is important in the company’s history or in general financial history (ie that is the day they increased the debt limit or the government will shut down). You should also know the Euro to American dollar ratio.

In general, pay attention to the news and what is going on in the market.

Then you might get taken to lunch. How you present yourself is just as important as the skill sets that you have. The interview starts right away at the career fair or networking event at which you meet someone. You are being evaluated right away.

You can make yourself more marketable by doing a CFA and passing at least Level 1. You could also show your writing skills by writing a primer on a field in science (ie genomics or bioprocess).

You should be ready to start the job right away. Do not apply too far in advance.

They are willing to train you as long as you have the vocabulary needed to understand the project. There is an onboarding process, especially in the summer for 5-6 weeks with the internship students where you will get trained.

Qualities that help in this career: critical thinker, detail oriented, well-read of financial journals as well as science, multitasker, thick skinned, able to meet deadlines, team player, react to news quickly, physically presentable, not too much questionable stuff on social media. Be sure you can tell “your story” (ie why did you leave the lab). Your pedigree doesn’t matter. What does matter is how well you interact with others (be a team player and don’t think you are better than others). They want to see how “hungry” you are for working the financial field.

Derik de Bruin, Ph.D.
Managing Director
Life Science Tools & Diagnostics
Global Equity Research
Bank of America Merrill Lynch
Merrill Lynch, Pierce, Fenner & Smith Incorporated
One Bryant Park, New York, NY 10036
Phone: 646-855-3100
E-mail: derik.de_bruin@baml.com
Derik de Bruin is a managing director in Equity Research covering US Life Science Tools and Diagnostics. In the *Institutional Investor All America Research Poll*, he was ranked #1 in 2010, #3 in 2011, and #2 in 2012-15. Before Derik joined Bank of America Merrill Lynch Global Research in 2011, he worked at UBS as a senior analyst covering the Life Science Tools and Diagnostics sector, at Credit Suisse First Boston as an analyst in biotechnology, and at Salomon Smith Barney as a research associate in biotechnology. He began his career as a research scientist working as an investigator at Rockefeller University; a postdoctoral fellow at Princeton University, Fred Hutchinson Cancer Research Center, and The Salk Institute; a graduate fellow at Memorial Sloan-Kettering Cancer Center; and a technician at Los Alamos National Laboratory. He has a BS in biology and chemistry from Eastern New Mexico University and a Ph.D. in molecular biology from Cornell University.

**Jillian Nguyen**

Technical Analysis  
Cornerstone Macro  
650 Fifth Avenue  
21st Floor  
New York, NY 10019  
212-257-4957  
jnguyen@cormacteam.com

Jillian Nguyen is a Research Associate on Cornerstone Macro’s Technical Analysis Team. She began her academic career at the New Jersey Institute of Technology, receiving a BS in Biomedical Engineering in January 2009. Prior to entering the workforce, Jillian received a PhD from the Graduate Program in Neuroscience at Rutgers University in October 2015 under the advisement of Prof. Elizabeth B. Torres and Prof. Thomas V. Papathomas. Her dissertation focused on developing algorithms to analyze complex human behaviors, focusing on patterns of sensory-motor fluctuations during visuomotor tasks. While at Rutgers, she was awarded the NSF Graduate Research Fellowship and the NIH Ruth L. Kirschstein National Research Service Award. With an interest in the business sector, sparked on by experiences within the Rutgers Biotechnology Training Program, Jillian took on roles as a Senior Associate at Partners2Market LLC, a valuation-consulting firm, as a Trading and Operations Intern at Alpine Partners US VI, and as an Entrepreneurial Lead for the NSF Innovation Corp program while completing her doctoral studies. She now works alongside the #2 ranked Technical Analyst on Institutional Investor’s 2015 All-American Research Team at Cornerstone Macro, a macro research firm in New York City. Here she is able to apply her computational background to identify trends and generate ideas based on the behavior of global markets.
Lulu Lin
Software Engineer
Bloomberg
lulul13@gmail.com

Lulu Lin is a senior software engineer works at Bloomberg L.P. She received a PhD in Cell and Developmental Biology and a MS in Applied Mathematics from Rutgers University prior joining Bloomberg. Since joining Bloomberg Trading solutions, she has managed numerous projects in buy-side middle office team. She is currently leading a team on developing the next generation of account and counterparty database.