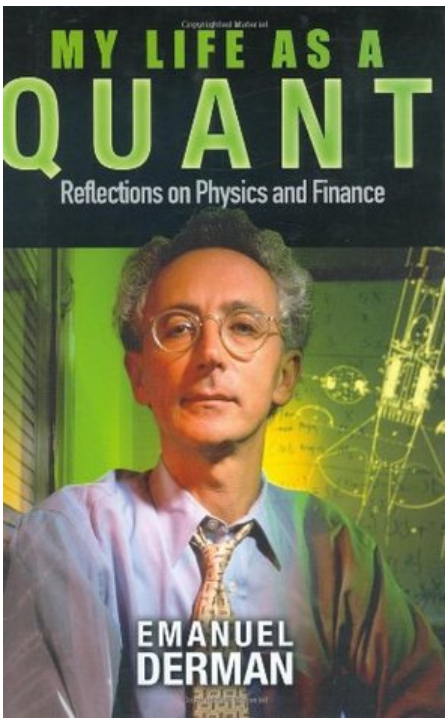

My Life as a Quant: Reflections on Physics and Finance

Emanuel Derman

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My Life as a Quant: Reflections on Physics and Finance Emanuel Derman
In *My Life as a Quant,* Emanuel Derman relives his exciting journey as one of the first high-energy particle physicists to migrate to Wall Street. Page by page, Derman details his adventures in this field--analyzing the incompatible personas of traders and quants, and discussing the dissimilar nature of knowledge in physics and finance. Throughout this tale, he also reflects on the appropriate way to apply the refined methods of physics to the hurly-burly world of markets.

My Life as a Quant: Reflections on Physics and Finance Details

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From Reader Review My Life as a Quant: Reflections on Physics and Finance for online ebook

Lyubomir says

The book surpassed my expectations. It provides a detailed look into the life of physics PhDs and professors in late 70s and 80s. When the author switches jobs, to move to Goldman Sachs, we have the opportunity to understand how the quants, physicists and mathematicians, came to set the trend on Wall Street with the invention of new models for trading complex securities, such as options, swaps and other structured products.

Steve Gross says

The author is bright and his career goes from PHD particle physicist to Bell Labs guy to Finance Engineer. Only the latter apparently makes him happy but he really yearns all the time to be back in physics. There's an undercurrent of an unhappy intellectual throughout the book. The latter part of the book is quite technical and only of interest to technical finance types.

John says

I picked up this book at the library because it was suggested by Goodreads or Amazon (I forget which) as a book I might like to read.

Derman got off to a bad start in the prologue (bottom of page 13) where he wrote, "How *does* a planet know that it must obey Newton's Laws, or an electron perceive that it must move according to the principles of quantum electrodynamics?" What? Planets *must* obey Newton's Laws? Electrons *must* move according to the principles of quantum electrodynamics? This guy, it appears, has got things backward if he thinks nature is somehow required to follow the models science has devised to describe nature. Nature does what it does without any consideration of our attempts to describe it. The models developed by scientists, wonderful as they may be, are not rules that nature must obey and anyone who believes otherwise is kidding himself.

Then on pages 49-50 he wrote, "One summer in the early seventies, during the student protests against the American invasion of Cambodia, Eva [his wife] and I went camping in the Catskills mountains with Chang-Li and his wife. After several days in a tent, cut off from any news, we went to meet my in-laws who were vacationing in a nearby hotel. As we arrived, my father-in-law somberly announced to us that a small bomb had exploded in one of the physics department's bathrooms. Without a moment's hesitation Chang-Li and I leapt in the air for joy, whooping and cheering." Derman was a graduate student in physics at Columbia at the time this occurred. It is difficult for me to comprehend the mind of a person who would rejoice in the bombing of his own department at a university.

But as the book unfolded, it appeared that Derman was able to grow out of his adolescent arrogance and attitudes. I have to admire him for being willing to describe his early experiences with such honesty. He is clearly a brilliant person and I enjoyed his description of how he migrated from an academician in physics to a practitioner in finance. I didn't understand much of what he did as a quant, but it was nonetheless

interesting to me. And I was delighted to see in the final chapter that he understands that man-devised models are not rules that nature or financial markets follow but rather attempts to describe what happens in nature and financial markets.

Muriel Fang says

A honest book on the journey up to the point when he left Goldman for Columbia Business School. The author does not dress up the important decisions he made: going to graduate school, picking out a research topic in graduate school, experience in post doctoral positions, as an assistant professor, as a new parent, as a new hire at ATT lab, as a new hire at Goldman... It is a humble account, and I think helpful for the young.

Stephen says

I didn't have any expectations of this book before I read it, other than it would hopefully give me some better insight into a part of the world of investment banking that I have worked. Towards the later part of the first half, I was starting to wonder when he would get to the finance part of his life, but once I got there I appreciated the lead-up. I was not looking to read a book on life in academia, but now that I have, I feel somewhat enlightened. The particulars of the physics theories were a bit over my head, but I grasped what he was writing about enough to understand the overall points. I think I will need to study options theory a bit more to fully appreciate the second half, but it was an interesting read and will give me more perspective while I continue to increase my knowledge in those areas. This book may not be a good pick for those that are not into physics or finance, though my 17 month old son enjoyed it. I read this book to him over the past couple of week for his bed-time stories.

Siah says

I finally finished Emanuel Derman's "My life as a quant" He is a great story teller. I found the stories around his life in physics much more appealing than his finance life. The most interesting part to me was the fact that his most interesting contributions came way after he finished his PhD. Also his detailed description of the implied tree model is very intuitive and interesting. Still, he is doesn't shy away from highlighting his weaknesses and struggles throughout his career and that makes the whole story appealing to the reader. He does not portray himself as a genius, yet he makes you admire his thirst for progress. One thing that frustrated me a little was that the pace of the text changes throughout the book. Sometimes the story goes very fast and sometimes it drags on an on. I really enjoyed the book and would give it 4.5/5 if I could.

Andrew says

This book was Emanuel Derman (Eman) dryly taking us through his life as a theoretical physicist turned quant. Though the material was fascinating, it was like listening to a boring professor -- dry, bland, and ultimately, self-defeating.

The one thing this book did have that was helpful is lots of context. We learn not only what Derman as a

quant does, but why, and what the business context is for it. He also clearly has a passion for explaining theories clearly as opposed to high-brow.

Overall, a good book, but boring. It's closer to 4 stars than 3.

I would recommend How I Became a Quant if you enjoy this kind of material.

Alex says

A very honest and balanced account of life in academia and industry that doesn't glorify or damn either of them.

It discusses what life is like in Physics and the nature of the problems he got to work on and similarly in Quantitative Finance.

Although it could have used some mathematics he did introduce some things and one doesn't expect (or desire) a textbook so it was pretty good.

I would recommend it to anyone considering switching from academia to industry or vice versa.

Nancy says

Not the most insightful of memoirs, this was more of a catalogue of professional achievements. In the first half, he reveals himself to be an incredibly arrogant physicist. (Full disclosure - in the book , Derman expresses scorn for both solid state physicists and experimentalists -- I myself belong to both of these categories.) In the second half which addresses his financial career, his arrogance is not as noticeable, so either he was actually humbled by his change in career, as he describes in the book, or I have the benefit of not being in his profession.

In the last chapter, he struggles futilely to make philosophical statements about physics and financial math and their respective abilities to describe and predict the tangible world. Despite references to God, he fails utterly in this attempt.

Suhrob says

An interesting autobiography of Emanuel Derman describing his life in academia (PhD and couple of post-docs, particle physics) and as a quant on Wall-Street from early 80ies.

Both world are fascinating and Derman is an excellent observer.

Currently "celebrating" my first year out of academia a lot of his experiences really resonated with me (which is also telling - he did his postdocs in the 70ies, the situation hasn't changed much apparently).

The most interesting parts of the book for me were neither the particle physics or options theory, but Derman's observations on psychology and relationships in high achievement (and cognitive firepower) environments, coping with failure, family life and so on. It is a pity that these almost completely disappeared in the final 30-40% of the books which concentrated on technical details of his work on financial modelling.

Overall an excellent book!

Lobstergirl says

There’s been handwringing over the last few years about all the smart young things coming out of university math and physics programs and heading for the big bucks on Wall Street. Like everyone else, I despise this despicable trend. Of course, Wall Street needs to be shut down. We need to go back to investing money the old fashioned way: in our demesnes, our serfs, and the Church’s indulgences. But reading a memoir like this one, you understand how the flight of brains to the Street can happen even to someone who isn’t an utter money-grubbing, dastardly bastard. Emanuel Derman came to the U.S. from South Africa in the 1960s, got his PhD in physics at Columbia, and took a lonely, low-paying academic job. He moved on to a higher paying but creatively stifling corporate job at Bell Labs (where, though you had a doctorate, your supervisor might only have a masters degree), where he often felt subservient and demeaned. After these positions, the relative freedom of Wall Street looked pretty good, and he joined the quantitative side of Goldman Sachs (that side being the less prestigious one, relative to the trading side, or sales), creating financial models and specializing in interest rate modeling.

Derman is a fluid storyteller and surprisingly literate writer. He quotes Blake and discusses Schopenhauer. He tells you about the plot of *Humboldt's Gift*, and expresses his admiration for Barfield's *History in English Words*. What makes the memoir most appealing is his wry modesty and humility. In many of his jobs, he views himself as the fish slightly out of water; he’s rarely the one in the most lofty position. Despite his PhD and intellectual smarts, he’s usually the newbie, forced to catch up with the cool kids, constantly learning the ropes. A story about his search for a PhD advisor at Columbia is particularly charming. He wanted to study with Gerald Feinberg, a young Wunderkind:

"I wanted to be Feinberg's student, but I didn't know how to go about it. Since it was premature for formal arrangements and since I was naturally reticent and shy, I simply began to greet him very politely whenever our paths crossed. Graduate school was a small community. In corridors and elevators and on campus, I was soon running into Feinberg several times a day, always giving him a polite hello and a nice smile. He would reciprocate similarly with a sort of nervous curling of the lips. As time passed, this limbo of flirtatious foreplay continued unabated. I could never find the courage to broach the question of being his student; I supposed I must have hoped it would just happen wordlessly. Every time I saw him I smiled; every time I smiled he bared his lips back at me with greater awkwardness. Our facial manipulations bore increasingly less resemblance to anything like a real smile; each of our reciprocated gestures was a caricature, a Greek theatrical mask signaling friendliness."

Derman never could get up the nerve to actually ask Feinberg and ended up with another professor.

David says

well..only if one is super interests on understanding Black/Scholes Price Options Theory in steroid mode, then one may not find this book interesting at all..pretty much like Greg Smith of describing his life stories at school, after school, boring here, and there..then finally the hype to break through to understanding more in depth of Black/Scholes Theory during his second tenure at Goldman Sachs..

Dave Bolton says

An interesting look at financial engineering from a former theoretical physicist who has made a career on Wall street. Covers the increasing sophistication of Goldman Sachs and their competitors from the early 80s to around 2000, including some key models (in a very light and non-intimidating way.)

Worthwhile if you are interested in financial markets or differences between research and practical science.

Dongliang Yi says

Basic introduction of the book:

The author, Emanuel Derman, is a co-developer of the short rate model – Black-Derman-Toy model. He is also the director of Columbia's Financial Engineering program. One special thing worth mentioning is that he switched his career from physics to finance at his 40's.

I read this book with recommendation from a financial engineering program. It is said to be useful for me to understand and accelerate a career in quantitative finance.

The first half part of this book is about Emanuel's life in physics, and it is not related to finance.

The second part is about his work and thoughts in wall street. The interesting part is that he had worked with many top quantitative finance researchers and practitioners, so the description of these talented guys (including author) is interesting for me to understand how they worked and thought on quantitative finance.

Courage to change:

Emanuel once had a dream to be a great physicist, and he spent more than ten years in the area. Unluckily, he never got a great achievement in physics according to his own standard and thus felt unhappy.

He changed his career to quantitative finance, and later became a top financial engineer in this area. Although Emanuel might not be a top physicist in the world, he later became a top quantitative researcher and practitioner thanks to his strong background in quantitative research.

More communication needed in finance area:

Emanuel described more co-work experience in quantitative finance than his previous work in physics. Communication with traders and researchers is important for him to develop financial models which are

usable in real world. In physics, he did research mostly by himself.

Models are wrong:

Financial models are less stable than physics models. As Emanuel wrote, “In physics you’re playing against God, and He doesn’t change his laws very often. When you’ve checkmated Him, He’ll concede. In finance, you’re playing against God’s creatures, agents who value assets based on their ephemeral opinions.”

Take Black-Scholes model as example, it has assumptions including constant volatility and risk free rate, divisible asset, lognormal distribution of asset price, etc. The reality is that those assumptions are almost not true. What a practitioner can do is to develop or select a suitable model which can explain most of the price, interest rate or volatility movement under a specific situation. Thanks to this, quantitative analysists keep developing more suitable models and the quantitative financial models are evolving quickly nowadays.

Renan Critelli says

O livro é uma biografia/memórias de um cientista que trocou o mundo acadêmico pelo mundo financeiro. Depois de seu doutorado em física de partículas na Universidade de Columbia (1973), depois de vários anos de pós-doutorado em diferentes lugares, e sem perspectivas de obter uma posição fixa em uma boa universidade, Emanuel Derman migrou para AT&T Bell Labs. Em 1985, passou a trabalhar com modelos financeiros em Wall Street, na Goldman, Sachs & Co.
Derman foi muito bem sucedido, mas sua troca de carreira não foi exceção: diversos físicos estavam abandonando a academia nos anos 80, um fenômeno novo nos EUA da época. A expansão da verba pública destinada a pesquisa tinha acabado, e a academia não conseguia absorver o número de pesquisadores formados, mesmo os bem competentes, como era o caso do Derman (qualquer semelhança com o Brasil de hoje...).
Em minha opinião, a visão do autor é bem equilibrada, sem elevar nem diminuir nenhum dos mundos. Como cientista, me identifiquei muito com a primeira parte do livro, em que o autor descreve sua vida como físico, seus pontos altos e baixos. A narrativa da saída do mundo acadêmico, e todas as dúvidas que o acompanharam, também é muito interessante. Além das recompensas financeiras, Derman conseguiu encontrar satisfação com sua vida em Wall Street, e por vezes os contrastes do mundo acadêmico/financeiro chegam a ser cômicos. Em alguns pontos, é difícil acompanhar o raciocínio devido a enxurrada de termos financeiros. Como tradicional em toda biografia, a parte final é arrastada. No geral, uma leitura divertida e que leva a algumas reflexões.
