The Trader Construction Kit Guide - How to Get a Trading Job

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INTRODUCTION

Depending on which industry statistic you prefer, something like 80-95% of all aspiring traders fail. The equivalent ratio for institutional traders is likely better, given the extremely competitive hiring and screening processes in place at most finance firms, but it is generally seen to be no better than a 50/50 proposition. There are a multitude of reasons for the alarmingly high washout rate of expensively educated, highly motivated individuals, but as I asserted in the 2017 paper *A Comparison of Current Academic and Industry Pedagogies for Developing Traders*:

"Based on my experience in the industry and my observations from academia, I believe that there are knowledge and skill gaps common to recent graduates from top-flight finance programs, principally:

1. A lack of understanding of how markets function and why, including the players present, their motivations, the types of trading they engage in, and the job descriptions of the traders they employ.
2. Little to no immersion-based knowledge of the dynamics of a live market.
3. No development of a trading process, including developing a view of the market, generating & evaluating candidate implementation strategies, and developing a trading plan for accumulating the desired exposure and managing the resulting risk."[1]

The goal of the *Trader Construction Kit* project (textbook and blog) is to provide practical resources to address those issues. In this companion paper I will explore how current students and recent graduates can improve their chances of leveraging that solid foundation into getting and keeping a seat on the trading desk.[2]

This guide is broken into five parts:

1. How to prepare for a trading interview.
2. Resources for development.
3. Choosing a market.
4. Surviving the first days on the desk.
5. Transitioning to the desk from another area of the firm.

We begin with what is, in many ways, the most difficult challenge: interviewing for a trading job.

Part 1 - How to Prepare for a Trading Interview

For current university students, preparing for a trading interview will involve a substantial amount of industry and company-specific research.

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[1] Rubano, Joel, A Comparison of Current Academic and Industry Pedagogies for Developing Traders (October 23, 2017). Available at SSRN: https://ssrn.com/abstract=3057447

[2] Common Sense Disclaimer: While this paper was prepared with as much care as possible, no warranties or guarantees of any kind are expressed or implied. The reader should not use this paper as a single source of job search information, and should take advantage of all available resources to prepare for a career in the financial markets.

The candidate must, at a minimum:

1. Know the Industry.
2. Know the company and its primary business.
3. Have a sense of the immediate evolutionary challenges the firm is facing.
4. Know the people they will be speaking with, their backgrounds, the markets they inhabit, and the products they trade.
5. Know as much as possible about how the market is traded at the target firm, and how the candidate's skills make them a good match for that product.
6. Prepare for some of the obvious questions they should expect to be asked.
7. Prepare for the programming & data science requirements of the job.
8. Understand the future implications of blockchain & cryptoassets.

1. Know the Industry
The opportunities available and the types of business transacted are, to a great extent, determined by the evolutionary state of the industry. Early-stage markets offer the most opportunities for rapid advancement for candidates with an entrepreneurial mindset and a willingness to innovate in an evolving operational environment. Fully-evolved markets have established career paths, with measured progression based on the mastery of and deployment of established knowledge sets. A candidate needs to know the evolutionary state of the industry they are targeting to calibrate their expectations of the potential career progression available to them, and to understand the company's expectations of their initial and to-be-developed skill set.

2. Know the Company
In *Trader Construction Kit* I focus the majority of the second chapter on describing the market activities of four categories of market participants: Hedgers, Merchants, Financials and Speculators. Each category participates in a market for specific reasons, engages in different types of risk-shedding, risk-modifying, or risk-taking activities, and hires traders will different skill sets to implement their business plan. A candidate must know what type of firm they are speaking with and understand the basics of their core business and corporate culture.

3. Have a Sense of the Immediate Evolutionary Challenges the Firm Faces
There is a *lot* of change going on in the world of finance and trading, at the moment. The Europeans are grappling with the implications of MiFID II, the British banks are trying to plan for the continuity of their business under all of the possible permutations of Brexit, the Americans are navigating a sea change from an environment of increasing regulation to one of possibly decreasing oversight, and everyone is dealing with the accelerating impacts of technology (AI, algorithms, blockchain, cryptocurrencies, etc.) on their core businesses. While a candidate will not be expected to be a subject matter expert on every last regulatory nuance, they will be expected to have a general sense of what is coming and how it may impact the business unit they are interviewing with.

4. Know the People and the Markets
In a Google and LinkedIn world there is no excuse for a candidate not having a basic familiarity with the backgrounds of their interviewers. The person arranging the schedule will generally provide a list, if asked nicely by the candidate. The candidate must know each interviewer's position within the company to understand their function, their implied perspective, and develop a sense of what sorts of questions to anticipate. A risk manager with a Masters in physics and a PhD

in quantitative finance will have entirely different concerns and ask entirely different questions than a proprietary trader with a background in the crude oil pits and scars on his knuckles. The candidate must find a way to be relatable to both.

A candidate should expect to speak to the head trader, their lieutenants (one of whom will probably be the hiring manager), a junior person to provide a skill-set comparison with a near-peer, and potentially members of the risk, analytics, and compliance groups. If that sounds like a lot of people, it is, and an aspiring trader should expect a full day of half-hour to hour long conversations with one or two people at a time. It can be difficult to maintain focus, but in the vast majority of cases the candidate must leave a positive impression on *every* interviewer and really shine with the one or two shot-callers they meet.

5. Know How They Fit in as a Candidate
In Chapter 1 of *Trader Construction Kit* (available at https://www.traderconstructionkit.com/read/), I list the positive characteristics of successful traders and the negative traits of unsuccessful ones. The candidate must accurately assess their unique strengths and weaknesses and how they apply to the demands of the trading environment at their target firm. If the candidate wants to build bleeding-edge algorithms at an industry-leading quantitative hedge fund, they had better *really* know how to code or they will be laughed out of the room. Ditto for an unassertive pit trader, a non-mathematical option trader, a disorganized market-maker, or an indecisive directional trader. There is no shame in being a poor fit for a particular job at a particular firm. There *is* a tremendous amount of shame in showing up for the interview either not knowing that, or attempting to pass oneself off as something they are not.

6. Prepare For the Obvious Questions
A current student or recent graduate with little to no practical trading experience to be quizzed on should expect the standard probability and logic-based questions. Read up on the Monte Hall question, basic conditional probability problems, and (my personal favorite) the TV Question. The candidate should expect questions about sports played, team activities, and their propensity for gambling and other risk-taking behaviors. In lieu of actual experience, the traders will want to see that the candidate can logically process information and make decisions quickly under stress. At some firms it is very fashionable to manufacture an artificially stressful environment to test the candidate, others will prefer a more collegial, conversational approach.

The candidate should also have at least a superficial familiarity with the benchmark informational resources for the market, both in terms of the standard educational texts and the book/blog/site/news of the moment that everyone is currently reading or talking about. Giving a blank stare to an interviewer who name-checks Nassim Taleb or references the Satoshi whitepaper is a big negative. A list of the standard resources that an aspiring trader should investigate to help them prepare for an interview can be found in Part 2.

7. Prepare For the Programming & Data Science Requirements
In 2017 the incremental must-have skills on the trading desk were programming and data science. In 2018, they are becoming mandatory. Python is far and away the platform of choice for most on-desk development, and its large library of pre-existing code modules like NumPy, Pandas, and Matplotlib make it relatively easy to manipulate data and produce usable results. Firms that employ AI, Deep Learning, or any sort of non-traditional data set analysis will employ significantly more esoteric and powerful tools. While it is true that most of the heavy programming work will

be done by highly specialized CS and Data Science graduates, on a going forward basis not being able to code will become akin to not being able to read or write. This evolution is happening very quickly, and as trading becomes increasingly machine driven, the person most able to transform data into actionable information will be the person seen as adding the value to the organization. One relationship that will not change in the future is that adding value = getting paid.

Fluency in Python and an aptitude for Data Science also serve as a valuable safety net in case the candidate is not hired as a trader. It is very common for even a top-notch candidate from a strong academic program to be hired into the firm in a non-commercial support position, either as an assistant trader, analyst, risk-manager or deal structurer. Support functions typically serve as a combination apprenticeship and extended interview for the trading desk. Making the transition from a support role to the trading desk presents its own set of unique challenges, which will be discussed in Part 5.

8. Understand the Future Implications of Blockchain & Cryptocurrencies

Blockchain (or distributed ledger technology) is a cryptographically secure, decentralized means of storing and transmitting data that will ultimately revolutionize the way high-value information is distributed, which will have massive impacts on the modern financial system. Cryptocurrencies (Bitcoin, Etherium, et al) are built on top of the blockchain, and can be used to facilitate transactions or store value, depending on the design and properties of the particular instrument.

Much of the initial focus has been on the meteoric rise in value and subsequent price volatility of the most popular cryptocurrencies. The future impacts will be much less headline-worthy, but massively more disruptive. Data handling efficiencies will lead to middle and back office functions being radically streamlined (read – eliminated). The traditional pipelines of debt and equity issuance could be heavily disrupted by Security Tokens that can be issued directly from an asset holder to the public without intermediation. Virtually every major financial institution is racing to build out capacity in both blockchain and crypto in an effort to secure a seat at the table and avoid being disrupted out of what may prove to be the most lucrative, transformative new business in the past decade.

Aspiring traders need to be aware of the current state of play, because there is a strong possibility that the firm they are interviewing with will be furiously developing capability in blockchain and crypto. The candidate needs to have a sense of the firm's position on the technology and be ready to demonstrate that they are aware of the basic principles and the implicit future challenges for the firm.

The only practical way of keeping up with the blinding pace of evolution (or trying to) in the blockchain & crypto space is by following thought leaders on Twitter. There are a lot of voices, all of them with unique perspectives and deeply held convictions, which leads to a lot of extremely pointed discourse (not all of it polite).

Assuming that the candidate has successfully secured a position at a trading firm, they must immediately start preparing for the demands of actually doing the job, which will involve substantial study, as seen in Part 2.

Part 2 - Resources for Development

Trader Construction Kit was written as a response to a decade and a half of inquiries from frustrated junior colleagues, analysts, risk managers and support staff seeking the best book to learn how markets worked and how to develop the skills necessary to make the move onto the trading desk. Unfortunately, there *was* no one comprehensive resource at the time, so I would cobble together a reading list of a dozen or so texts, a handful of magazine and journal articles, and a movie or three. Some were classics in the field, others somewhat more esoteric, but each illustrated a particular aspect of what it meant to be a successful trader (or, in some cases, an extremely unsuccessful trader). That same list can also serve as the logical extension of the material covered in *Trader Construction Kit*, building on the methodological framework and expanding the reader's knowledge base.

The Best Books for Beginning Traders:

1. *Liar's Poker: Rising Through the Wreckage on Wall Street* by Michael Lewis
2. *Bombardiers* by Po Bronson
3. *Metal Men: How Marc Rich Defrauded the Country, Evaded the Law, and Became the World's Most Sought-After Corporate Criminal* by A. Craig Copetas
4. *When Genius Failed: The Rise and Fall of Long-Term Capital Management* by Roger Lowenstein
5. *Rogue Trader* by Nick Leeson
6. *Options, Futures, and Other Derivatives* by John C. Hull
7. *Technical Analysis of the Financial Markets: A Comprehensive Guide to Trading Methods and Applications* by John J. Murphy
8. *Dynamic Hedging: Managing Vanilla and Exotic Options* by Nassim Nicholas Taleb
9. *Reminiscences of a Stock Operator* by Edwin Lefèvre
10. *Market Wizards: Interviews with Top Traders* by Jack D. Schwager
11. *The New Market Wizards: Conversations with America's Top Traders* by Jack Schwager
12. *Charlie D. The Story of the Legendary Bond Trader* by William D. Falloon
13. *Every Hand Revealed* by Gus Hansen

The first five books focus on what it means to be a trader, the next three build the technical skills necessary to operate in the market, and the final five act as an extended series of case studies on trading decisions.

Beginning with the first five experiential books:

1. *Liar's Poker: Rising Through the Wreckage on Wall Street* by Michael Lewis
Liar's Poker has probably set more people on the path to the trading desk than any other book (it certainly did, in my case). *Liar's Poker* is Michael Lewis' first-hand account of his time on the New York and London bond trading floors at the legendary Wall Street bank Salomon Brothers in the late 1980s. It is by far the most accessible book on trading, providing a clear, accurate (if slightly dated) perspective on how bank trading floors operate and the types of people that inhabit them. It is also extremely funny. *Liar's Poker* is a must-read, particularly for those not currently in the industry or who are unfamiliar with how trading desks function.

2. *Bombardiers* by Po Bronson

Bombardiers is the fictional account of a group of bond salesmen at the San Francisco office of a global investment bank in the 1990s that are pushed to, and in some cases past, the breaking point by the stresses of the job. *Bombardiers* most accurately captures the frenetic feel and surreal insanity of a modern trading floor, and does so while managing to be funnier than Michael Lewis' *Liar's Poker*.

3. *Metal Men: How Marc Rich Defrauded the Country, Evaded the Law, and Became the World's Most Sought-After Corporate Criminal* by A. Craig Copetas

Metal Men is a relatively unknown book (which used to be all-but impossible to find) that offers a view into the rarely-seen world of commodity merchants operating in an early-stage physical market. The book takes place during the advent of the spot crude oil market in the 1960s and 70s, and offers a wealth of anecdotal information about illiquid, physical trading that is unavailable from any other source. Aspiring traders would do well to take note and apply the lessons to their job search, as developing markets offer some of the best conditions for job creation and rapid advancement, as well as presenting the smallest hill to climb in terms of the established knowledge base.

4. *When Genius Failed: The Rise and Fall of Long-Term Capital Management* by Roger Lowenstein

In the early 1990's Long Term Capital Management was home to the most incandescently brilliant collection of bankers and traders ever assembled, deploying state-of-the-art trading technology to generate eye-popping returns and basking in the adulation and envy of pretty much, well, everyone. Then suddenly, impossibly, the firm imploded during a tumultuous six-week period in 1994. Lowenstein's book is a detailed account of the disaster, and a fascinating tale of hubris and poor risk management by a group of individuals that could have, and indeed *should* have, known much better.

***5. Rogue Trader* by Nick Leeson**

Rogue Trader is the autobiographical story of how Nick Leeson singlehandedly lost $1.4B via a series of ever-larger unauthorized speculative positions while running the Singapore trading operations of Barings Bank from 1992 to 1995. Though it is sometimes criticized as being an overly self-serving interpretation of events, it is worth reading as an examination of how pressure to perform can lead a seemingly normal, relatively grounded individual into a destructive spiral of fraud and illegal activity. It is also an interesting case study of how much an organization can collectively delude itself, ignore common sense, and bend its own rules to accommodate a star employee operating what appears to be an extremely profitable business.

6. *Options, Futures, and Other Derivatives* by John C. Hull

It is difficult to overstate the importance of Hull's *Options, Futures and Other Derivatives*, which is ironic, considering that it is generally referred to as "the bible" of the financial markets. Recently updated in a 10th edition, it is a big, imposing book that has evolved and expanded its scope considerably with each successive iteration. Option trading has a large and extremely complex body of theory, and can be an extremely daunting subject for the uninitiated. *Trader Construction Kit* presents an introduction to the basics of the options market, standard valuation models, Greek risk measurements, and provides a dynamic hedging example…and even that relatively condensed coverage necessitated by far the largest and most complicated chapter of the book. Hull's text provides the most complete coverage of the topic available, and offers a clear, comprehensive treatment of the mathematics underlying derivative pricing models and the resulting risk metrics. It should be considered mandatory reading for prospective practitioners, particularly those interested in option-centric careers in derivative trading, transaction structuring, and complex deal origination. This is doubly true for a trader contemplating a customer-facing role at a bank, merchant, or asset management firm, where it is almost impossible to price and hedge deal flow without a solid understanding of option fundamentals.

7. *Technical Analysis of the Financial Markets: A Comprehensive Guide to Trading Methods and Applications* by John J. Murphy

Technical analysis is the study of chart patterns as a window into market sentiment and trader psychology, and is an extremely polarizing concept in the industry. Some practitioners flatly refuse to acknowledge its predictive utility, while others exclusively employ pattern-based analysis of the market to generate trading strategies. I make the argument in *Trader Construction Kit* that a hybrid approach incorporating both fundamental and technical information sources is maximally effective, employing technical analysis to refine the trader's view and provide perspective on the potential magnitude and direction of price responses to the evolution of the fundamental landscape. Technical analysis has an extremely large body of theory, ranging from simple graphical tools to exotic, complex interpretation systems. I believe that the basic trend and pattern analysis techniques can be applied to any liquid product, regardless of market, and therefore have the most predictive utility. Murphy's *Technical Analysis* is *the* benchmark resource for understanding the core concepts of trend, support, resistance, and pattern analysis. The main value in Murphy's text resides in chapters 4 through 6, where he discusses the basic patterns common to all markets and gives clear, concise interpretations as to why they occur, their significance, and the implications for future price movements. Murphy's book is also a worthwhile read for those who do not ever intend to employ technical analysis, but who will most certainly share the market with traders that are.

8. *Dynamic Hedging: Managing Vanilla and Exotic Options* by Nassim Nicholas Taleb

Back in the dark ages, risk management was an obscure mathematical discipline exclusively practiced by bespectacled corporate drones and the sorts of people who once excelled at competitively reciting the digits of Pi. Traders did not practice risk management, they practiced risk *taking*. They also generally worked in a pit, settled disputes with their fists, and had very little use for more than two decimal places. This all changed in 1997 with the publication of Nassim Taleb's groundbreaking text, *Dynamic Hedging*. *Dynamic Hedging* offered the first glimpse of Taleb's pragmatic approach to *trading* risk management, in which market-facing practitioners must understand the limitations and idiosyncratic nuances of the tools and techniques they deploy, lest they be destroyed by ignorance or misplaced confidence. Be warned, Taleb asks a lot of his reader, presenting high-level information at great velocity, frequently with little preamble. Prospective readers should consider a warm up lap through Hull's *Options, Futures and Other Derivatives* to refresh their understanding of the basics of option theory and derivative math before attempting *Dynamic Hedging*.

9. *Reminiscences of a Stock Operator* by Edwin Lefèvre

Every list of the best trading books must contain Edwin Lefèvre's *Reminiscences of a Stock Operator*. *Reminiscences* is a fictional work that somehow manages to incorporate literally every significant trading principle into the boom and bust cycles of the protagonist's story arc, all without feeling contrived or sounding like textbook. *Reminiscences of a Stock Operator* was published in 1923, and it is impossible to fully appreciate how revolutionary it must have been in its time. One caution for prospective readers, since as a work of fiction it is not as heavy-handedly pedagogical as a pure textbook, it is possible to inadvertently skim over valuable information. Take the time to give *Reminiscences of a Stock Operator* your full attention, it is well worth it.

10. *Market Wizards: Interviews with Top Traders* by Jack D. Schwager
11. *The New Market Wizards: Conversations with America's Top Traders* by Jack D. Schwager
Jack Schwager's *Market Wizards* and *New Market Wizards* books are a series of interviews the author conducted with a group of elite commodity, foreign exchange and bond traders. In my opinion, they are critical books for novice traders to read, preferably early in their career. Neophyte traders are frequently told that there is a "correct" way to approach a particular market. This is not true. Every trader must develop a style that compliments (and leverages) their unique individual strengths, and Schwager's books are the best possible proof of this theorem. All manner of personalities and trading styles are on display, the common denominator being that each interview subject has developed a method of observing and interacting with the market that makes sense to *them*. The reader is free to compare and contrast different methodologies, a particularly useful exercise for young traders who are still evolving their own approach to the market. There is a tremendous amount of practical information on offer, and the interviews with Bill Lipschutz, Stanley Druckenmiller, Paul Tudor Jones, and James Rodgers are well worth the price of admission.

12. *Charlie D. The Story of the Legendary Bond Trader* by William D. Falloon
Falloon's *Charlie D* is a somewhat obscure biography of bond trader Charlie DiFrancesca, who in the late 1980s was the largest independent trader in the Treasury pits (a mantle later passed to Tom Baldwin, one of the interview subjects in Schwager's *Market Wizards*). Charlie D's life story is interesting, to be sure, but the real value in the book lies in Falloon's transcription of a videotaped presentation DiFrancesca gave in 1989 to members of the Chicago Board of Trade. It is possibly the most valuable 30 pages I have ever read on the *technique* of trading. Though Charlie D is describing a somewhat dated, very pit-centric method of interacting with other traders, the basic concepts of evaluating a market, acting with decisive intent when transacting, and learning to be disciplined when taking profits and losses are as critical now as they were then.

13. *Every Hand Revealed* by Gus Hansen
I argue in *Trader Construction Kit* that playing medium to high-stakes no-limit poker is the best possible method of learning to take trading risk, short of actually sitting on a desk. Gus Hansen's *Every Hand Revealed* presents a unique opportunity to look over the shoulder of a world-class poker player as he plays through five days of a major tournament. Hansen took detailed notes on each of the 329 hands he participated in during the tournament, including his risk/reward assessment, strategy, mid-hand decisions, and the ultimate profit or loss. The reader is able to follow along as Hansen works through 329 decisions under uncertainty, and in so doing provides a unique perspective on the cumulative effects and path dependence of trading/risk management decisions. It is fascinating to observe how Hansen's decision calculus on the 190th hand (for example) is impacted by the considerations immediately relevant to the 190th risk/reward scenario *and* the cumulative information gained and psychological wear & tear accrued from hands 1 through 189. This is something not generally touched on in theoretical literature, but is very much a part of trading in the real world. Trading decisions are not isolated events that occur in a pristine intellectual vacuum, and every trader must find a constructive way to manage the ongoing process of operating in the market.

New Trading-Related Books & Programming Resources:

The previous texts are the best trading-related books that I am aware of (and have read cover-to-cover, sometimes repeatedly). Nothing is static in the financial markets, and even seasoned practitioners must continually evolve and improve to remain competitive. Here are some of the newest (and most newly-relevant, given the quantitative drift of the industry) resources that I have recently found and am currently reading through:

***A Quantitative Primer on Investments with R* by Dale W.R. Rosenthal**
A comprehensive, surprisingly funny introduction to quantitative finance written by an elite industry practitioner & professor and published in 2018.

***Python for Finance* by Yves Hilpisch**
Tremendous resource that dives right into the key libraries (NumPy, Pandas, & Matplotlib) that form the bedrock of most financial programming.

***Advances in Financial Machine Learning* by Marcos López de Prado**
An advanced text that has a lot of value for non-programmers. The first chapter should be considered mandatory reading for any firm considering a significant ML build-out.

***Data Science from Scratch* by Joel Grus**
A code-intensive introduction to the basics of Data Science using Python.

Disclosure: I have no financial or business relationship with the publishers or authors of the aforementioned books and am not being compensated for referring them. *Trader Construction Kit* is mentioned briefly as a resource in the Commodities section of Rosenthal's *A Quantitative Primer on Investments with R*.

Part 3 – Choosing a Market

Depending on the options available to the recent graduate, they may have the freedom to choose between one or more firms, or one or more markets within the same firm. This is a critical decision. In *Trader Construction Kit* I explore how financial markets evolve through time and that the relative participation of different types of firms, the roles of the traders they employ, the types of business they transact depends heavily on the current developmental state. The soon-to-be trader needs to understand their particular strengths and weaknesses and make sure that they select a market and product that allows for their strengths to be accentuated and weaknesses minimized. It's a bad idea to go into a customer-focused, deal heavy role if you are uncomfortable around people and don't like talking on the phone. Don't sign up for a quantitative trading job if you can't stand long hours of debugging code with noise-cancelling headphones on and little to no human interaction, etc.

The aspiring trader also has to take a cold, hard look at the current state and anticipated future evolution of the potential markets they are contemplating entering. There is a tremendous difference between competing in a growing market with money flooding into the space and a low knowledge barrier to entry and trying to survive in a mature or shrinking market with capital flight and an ultra-high level of established technique necessary to operate. Many young risk-takers (including myself, to be honest) make the mistake of choosing the “tough” market with the “real” traders over the developing market with significantly easier competition. Voluntarily choosing to make your trading career harder, particularly at the beginning, is a bad bet.

It is also important to consider the future evolutionary path of the market to understand the potential for career longevity and advancement. Once a trader learns a market, they become a specialist in all sorts of esoteric knowledge that is usually completely useless in any other product. While I believe that it is true that a good trader can learn to trade any market, transitioning from one product to another (which is in itself a challenge) requires starting over at a low level and re-building. Someone hoping to make it through Year 1 should probably not worry excessively about the five and ten-year growth potential of their market, it is still worth factoring into their calculus.

Once the trainee chooses their path and starts the job their first priority becomes keeping the job, which is not as easy at is sounds on a trading floor. Some practical advice can be found in Part 4.

Part 4 - Surviving On A Trading Floor

To succeed as a trader, a trainee must first navigate the minefield of their first few months on the job. It is important enough that in *Trader Construction Kit* I devote an entire chapter to the challenges of assimilating into a trading desk. Here are some pieces of practical advice that I wish I’d had at the start of my career:

1. It’s not going to be like a job at a tech start-up.
2. A new hire is no longer a beautiful and unique snowflake.
3. Trainees don’t have a name until they earn one.
4. A junior trader will need support from a variety of other groups to succeed, so better start cultivating it.
5. There is a massive difference between academic understanding and practitioner mastery of the same material.
6. Learning and assimilating the corporate culture is everything.
7. There are a million ways to self-sabotage, choose none of them.
8. Opinions are formed very rapidly, and second chances are rarely given.
9. There are different rules for different people.
10. It’s a competition, so start competing.

1. It’s Not Going to be Like a Job at a Tech Start-Up

In contrast to well-funded start-ups where seemingly every n00b coder is welcomed with an avalanche of corporate-logo swag and a personal robot smoothie valet, new arrivals on a trading floor will typically face an altogether less hospitable greeting. In the best-case scenario, they will get the desk, chair, and computer previously employed by the most recent person to get fired. In a firm where “our most important asset is our people”, they may rate a terse “Hey” from the stressed-out zombie sitting across from them and, maybe, directions to the bathroom.

This coddling gap can be hard to stomach when, after being operatically berated by a belligerent MD with a hair-trigger temper, the recent grad sees an Instagram selfie by their ex-roommate on a kite-sailing boondoggle in St. Barthes to celebrate the *killer* launch of their new mobile app for pets. Guess who just happened to run into the Hadid sisters on the beach! Like? No! Do Not Like!

2. A New Hire is no Longer a Beautiful and Unique Snowflake
MBA students from top-flight universities have been groomed to be the future leaders of the world, special people with unique talents and limitless potential. PhDs from top-flight universities are even more special, like magical unicorns covered in genius dust. Imagine how they must feel when they arrive on the trading floor, chock full of potential and genius dust, only to be called a *dumbass* by a Cro-Magnon trader with a Bachelor's degree from a *community college*. How dare they! I have an asteroid named after me. A big one!

The somewhat depressing revelation for many expensively educated hires is that, at a top-flight financial institution, gaudy degrees and cited contributions to basic science are extremely common. "Chess Grandmaster? We have four already. Now that you're here, we have enough for a basketball team. You can play the String Theory PhDs from Risk Management."

3. Trainees Don't Have a Name Until They Earn One
Nobody on a trading desk bothers to learn a new person's name until they do something to distinguish themselves, good or bad. To compensate, most new employees end up with some sort of a behind-the-back nickname, which can range from cruelly dehumanizing to totally bad-ass. Sure, everybody wants to be "The Punisher" or "El Diablo", but sadly, most people end up as "Tuna Sandwich Guy" or "Lax Bro #4".

They shouldn't get upset, and they shouldn't take it personally. It happens to everyone. When they become a senior trader (*if* they become a senior trader), it will be their turn to be too busy grinding their teeth and staring in horror at the wreckage of their crude oil position to pay attention to what's-his-name sitting across from them wearing a Brine Lacrosse polo shirt and eating a tuna sandwich.

4. A Junior Trader Will Need Support From a Variety of Other Groups to Succeed, so Better Start Cultivating It
As seen in this excerpt from *Chapter 16 – Navigating the Corporate Culture* of *Trader Construction Kit*:

"The modern professional trader is almost never a lone wolf. At anything other than the smallest shops, he will rely on a variety of support functions from deal entry to risk management to analytical and operational support. The ability to productively interact with the other groups on the floor and the other traders is critical."

Building those bridges as a new hire can sometimes be tricky, particularly when dealing with on-desk analysts and risk managers that were never considered (or passed over) for the open trading job. They will often choose to take out their frustrations on the person who was hired in a passive-aggressive fashion. This is doubly problematic if the newly-minted trader relies heavily on them for informational inputs, or is subject to their risk management oversight. There is no easy solution, but one productive approach is to remind the slighted analyst or risk manager that the only constant in a trading organization is turnover, and that maximizing their interactions with the desk (including its newest inhabitant) is the surest way to improve their chances at the next job.

5. There is a Massive Difference Between Academic Understanding and Practitioner Mastery of the Same Material

Some new hires (particularly those with asteroids named after them) feel compelled to prove this point early in their career by voluntarily lecturing the senior traders and management on their deep, penetrating insights into the market gleaned from their *Advanced Topics in Finance* capstone project. This tends to go poorly. Almost by definition, nothing a trainee trader says for the first three to six months is good for anything other than the amusement of the rest of the desk.

One of the primary tasks of any new trader is to identify their particular knowledge gaps relative to their more experienced colleagues, then seek to close them as rapidly as possible. They must read all of the relevant industry research and analysis, study the benchmark texts on trading (a list of resources can be found in Part 2), ask questions, and accept all offers from more experienced traders to sit with them and have them explain the nuances of their market. The lack of practical market knowledge is the most glaring deficiency common to all new hires, and it is completely understandable. You can read as many books about proper swimming technique as you want (including my forthcoming 624 page textbook, *Swimmer Construction Kit*…just kidding), but that body of theory does not compare with what you learn in five minutes when you jump in the ocean and try to keep your head above water. There really aren't any shortcuts to understanding how a market works, which comes with time, focused observation, and continuous immersion.

6. Learning and Assimilating the Corporate Culture is Everything

Again, from *Chapter 16 – Navigating the Corporate Culture* of *Trader Construction Kit*:

"The trading floor is a workplace unlike any other, and can vary significantly from firm to firm. The atmosphere on the floor is determined by the trading culture, and the trading culture is determined to a great degree by the head trader and his lieutenants. Some floors are hushed libraries of academic intensity, silent except for grinding teeth, mouse clicks, and the soft snap of Advil and Adderall bottles being opened and closed. In a more clubby atmosphere one might see formerly staid bankers slouching around at a hedge fund in polo shirts and deck shoes, alternating world-weary market chatter with shot-by-shot analysis of the last round of golf. At a global financial powerhouse the floor will be a football-field-sized maze of desks, screens, and over-dressed stress cases ready to out-intense the other ex-lacrosse bros for a chance at the Associate Junior Vice-President slot opening up next fiscal year. At a scrappy up-and-comer the trading room will be furnished with homemade plywood desks and lawn chairs, and the three founders will try to out-gamble their cash burn in their shorts and flip-flops while playing first-person shooters on the office Xbox.

Succeeding as a trader is dependent on being accepted on the floor, whatever its quirks and characteristics. It may feel disconcertingly like being back in high school."

Please note, I'm not suggesting that a conformist attitude is in any way mandatory. Ideally, the trader would have researched the firm's culture as part of their interview preparation and chosen a firm that was a good match for their personality. What I *am* saying is that the early days on a trading floor are not the time to ruffle feathers, pick fights, or in any way piss off the people that the junior trader desperately needs to learn from to survive. An awareness of and sensitivity to the unwritten cultural rules will go a long way to helping the new hire integrate onto the desk.

7. There are a Million Ways to Self-Sabotage, Choose None of Them
Chances are, a recent graduate at a finance firm will be living in a new, exciting city and getting their first taste of real money, which often leads to all sorts of extracurricular bad behavior. Beware, it is entirely possible to party yourself out of a job, particularly when taking into consideration…

8. Opinions are Formed Very Rapidly, and Second Chances are Rarely Given
One last excerpt from *Chapter 16 – Navigating the Corporate Culture* of *Trader Construction Kit*:

"As discussed in Chapter 14 – Managing Positions, sooner or later every trader will have to deal with a significant losing position. Young traders are particularly vulnerable, due to their relative lack of experience anticipating dangerous market conditions, aptitude at handling them, and absence of built-up credibility with the desk and senior management.

The first disastrous trade is frequently a career-defining moment for a young trader. If he manages the problematic position efficiently and acquits himself in a professional manner, he will earn respect and a continued ability to do business. Making a bad situation worse and exhibiting poor behavior will likely ensure that the trader's first bad trade will be his last."

Most early-career traders fail to understand exactly how thin the ice beneath their feet is during the first few months until they find their footing and start to produce meaningful profits for the firm. The most common mistake is over-aggressively sizing their positions and risk tolerances relative to those of their more experienced colleagues. For a senior trader with a $50M target and $20M annual stop-loss, losing $1M is a bad day at the office, nothing more. The same loss for a junior trader would likely be devastating, particularly if they compound the error by not exercising good discipline, losing control of the exposure, and failing to show the proper degree of respect for the firm's capital.

9. There are Different Rules for Different People
Trading is all about production. A proven money-maker, particularly a big hitter, will quickly develop a level of importance to their firm that will obscure almost any negative characteristics or actions. An unproven junior trader will not be cut anything like this level of slack, and it is critical that they understand this before overstepping their bounds and committing a damaging faux pas. They must also be aware that the latitude that profits grant is quickly erased by drawdowns and underperformance. It's all jeans and flip flops and coming and going as you please when you're up, but the second the P&L goes negative its back to 12 hour days in a suit until you earn it all back.

10. It's a Competition, so Start Competing
I characterized the first few month on a trading desk as a minefield, which would logically suggest an approach built on caution, deliberation, and measured progress. The problem is, it actually a *race* through a minefield. Being first to get up to speed on the market means first to get a trading book, which means first to generate P&L, which means the best chance to be the top performer at the Junior/Assistant Trader level, which means the first to be promoted to Trader, etc. Everything on a trading floor is first, fastest, or best, and the reward for being any or all of those is money. Lots of money. Better get going. Chances are someone in your class read this section an hour ago and is already on page 34 of *Liar's Poker*.

Part 5 - Making the Transition from Support Group to Trading Desk

Preparing for a trading interview is a like cramming for an exam, a short period of intense preparation followed by a draining day-long session that demands total focus and maximum effort. Sadly, most candidates will fail this test. It need not be the end of the road, however. Applicants passed over for trading opportunities can often get a second bite at the apple by joining a trading firm in a support capacity, then seeking to move onto the desk. Making the transition to a trading seat from a support role will take preparation, a plan, and a significant amount of discipline and endurance, and the relative success or failure of the effort will often hinge on the individual's interpersonal skills as much as their technical knowledge.

Newly-hired support staff will be slotted into the firm in either a front office, middle office, or back office role. The front office is the commercial function of the firm, encompassing the trading and origination desks and personnel that work closely with them, including dedicated on-desk analysts, members of the structuring group, and senior fundamental and quantitative analysts. Middle office functions include the risk group (though it is technically outside of the trading reporting chain), the portion of the analytics groups that does not report directly to trading, and the operations group that handles the scheduling and delivery of physical transactions. The back office handles purely administrative functions, and is composed of the credit group, the legal group, the contract administrators, and the compliance group. The closer to the desk the aspiring trader starts, the better.

Support staff should expect to receive little help in their progress toward the desk from their current management, as the heads of support functions are concerned with maintaining a smoothly operating group, not serving as a training ground for another business unit or facilitating the aspirations of their employees. It will be necessary for the aspiring trader to carve out some portion of their day to work on building relationships with the members of the trading desk and acquiring the skills and market knowledge necessary to progress, which in practice may mean coming in early and/or staying late to actually complete their assigned work.

It is critical for support staff to understand that the onus will be on them to drive the process. As seen in this excerpt from *Trader Construction Kit*:

"There is one huge misconception that prevents people from being hired onto a trading desk from some other area of the company: aspirants believe that some innate quality of theirs will shine through as they toil away on the cover sheets for their TPS reports, that senior management will somehow identify it through unspecified means and, in a stirring act of trust and belief, whisk the employee off into a fairytale world of four-screen desks, turret phones, and lavish compensation. It does not work like that. Anyone seeking to escape support-staff hell will have to do the following:

1. Make the management of the trading desk aware that he really wants to be a trader and would strongly consider anything up to and including murder as a means of career advancement.[3]
2. Make sure he understands the requirements of the position he is seeking, and show that he is attempting to evolve in that direction, to the maximum extent possible. This is the crux

[3] I would hope that I would not need to clarify this for anyone, but this is a joke. Do not murder anyone. This is not *American Psycho*.

of the matter. Nobody cares how good of a confirmations analyst or accounts payable coordinator the anonymous drone from down the hall is; it has no bearing on their capability to fill a trading seat.

3. Be engaged in the firm's business, show interest, initiative, and make the most of any opportunity. It is difficult for a person in a support function to be current on the market, but he can at least know which markets the firm participates in, etc."

The goal is to be seen as the first in line for the next trading vacancy *by the trading desk*. Support functions are powerless to push an analyst or risk manager onto the trading desk. Senior management of the firm can facilitate a move, but are generally loathe to anger the producers by shoving someone into the group that they may not want. The desk has to feel the candidate is a good fit and can add value to consider bringing them on, otherwise they will go to the external market. Every internal candidate will be competing against the universe of potential external hires on the basis of being a (probably) cheaper known quantity with upside potential. If the desk does not know the candidate and believe that they have something to offer and room to grow, they will hire from outside the firm.

There are potential downsides to being on what amounts to a multi-year job interview. Familiarity breeds contempt, which cuts both ways. The day-to-day interaction with the trading desk gives the traders the opportunity to form opinions about the analysts, etc. There is a need for the support staff member to guard and curate their professional image over an extended period of time, which can be challenging. Being on point for eight hours of interviews is hard, maintaining that level of focus for eighteen months is extremely stressful. Worse yet, seventeen months and twenty nine days of focus, dedication and unwavering competency can be completely undone by one bad day, blown presentation, stupid argument, or regrettable social interaction. It can be difficult for support staff to understand (or stomach) that there are two sets of rules, one for the trading desk and one for everyone else. Profitable traders are often granted an almost incomprehensible degree of behavioral latitude, frequently going unpunished for actions that would mean discipline or dismissal for an employee that wasn't currently up $50M for the year. It's not right, and it's not particularly fair, but it does happen.

One of the biggest (and most inexplicable) mistakes support staff make is to loudly, publicly assert that they should have a trading job because they are smarter, have more latent talent, or have a more advanced degree than the people currently on the desk. It normal for nascent markets to reward different behaviors and skill sets than developed markets require, and each successive generation of analysts and traders will invariably be better educated and start from a higher informational baseline than their predecessors, sometimes to a ridiculous extent. This can be extremely frustrating for newly-minted PhDs expected to take orders (and abuse) from a comparative Cro-Magnon with a low-rent bachelor's degree who lucked into the last good trading job right before the market evolved. Highly educated newcomers would do well to remember that every successful trader has developed (or assimilated) an experientially-based body of knowledge and technique for operating in the market, one that they will need to master to take their place on the desk. Alienating the only source of information is a very, very bad idea.

Support staff need to be aware of, and take maximum advantage of, their opportunities to interact with the trading desk and learn the firm's business. If a senior trader offers to explain something about the market, make time to listen. If the head of analytics offers research that informs the traders' decisions, be sure to read it. If there is a mentoring program, join and take full advantage of it. If there is internal training, sign up for it. *Do not squander opportunities*. Help that is refused and resources not taken advantage of will not be re-offered, and members of the trading desk will definitely remember analysts who bemoan their lack of advancement but were "too busy" to sit on the desk, go to a class, or read a research report.

In addition to the market and product-specific knowledge that support staff will have to assimilate by osmosis from the traders and on-desk analysts there will be a great deal of basic information (see Part 2) that they will have to master.

An aspiring trader temporarily trapped in support-staff purgatory should use their newfound perspective to honestly re-assess themselves relative to the demands of the job in general and the particular way it is practiced at their firm. As the saying goes: *Everybody likes sausage, until they see how it is made*. Seeing firsthand what the job entails and the demands it makes of its practitioners has led many aspirants to realize that it really *isn't* for them, after all. Figuring that out before making a committing move to the desk is a mature, sensible decision. A productive career as a risk manager or analyst at a successful firm will frequently be significantly more lucrative, in the long run, than an unsuccessful stint on a trading desk followed by a swift termination.
In summary, support staff must do the following to transition to the trading desk:

1. Take responsibility and drive the process, to the maximum extent possible, as their current job will typically not have an established evolutionary path to the trading desk.
2. Understand that there will be a substantial amount of self-education, both in terms of specific markets and products and general trading information.
3. Immerse themselves in the culture of the firm and the trading desk, in particular.
4. Take advantage of *every* opportunity to work with and learn from members of the trading desk, both to develop knowledge and to build relationships.
5. Be professional and learn to deal with adversity instead of becoming frustrated and giving up, lashing out, or finding any one of a hundred ways to self-sabotage their progress toward their goal.

Aspiring traders must dedicate themselves to the process, work to increase their knowledge base, and take advantage of every opportunity to make the small, incremental steps that will ultimately lead to their jump to the trading desk.

CONCLUSION

Something like 80-95% of the people who started this paper did not make it this far. For those that did, congratulations, your work ethic can be a real, tangible advantage in your quest to become a trader. As seen in this quote from the first chapter of *Trader Construction Kit*:

"Being a professional trader is a two-part problem, how to evolve to be the best possible risk-taker and how to develop, refine, and deploy the most efficient process.

For most people, success as a trader is less a matter of deus ex machina brilliance and more a result of a steady progression, an ongoing evolutionary process wherein every student starts with innate skills and attempts to out-learn and out-develop peers."

So, get to work.

For more information about *Trader Construction Kit*, please see:
https://www.traderconstructionkit.com

Some of the material contained in this paper was previously published as a series of posts from the *Trader Construction Kit* Blog, which can be found at:
https://www.traderconstructionkit.com/blog/