DEBORAH W. GREGORY

Unmasking Financial Psychopaths

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Unmasking Financial Psychopaths

Inside the Minds of Investors in the Twenty-First Century

Deborah W. Gregory

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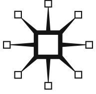

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This book is dedicated in memory of W. B. W.

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1

Introduction

Since the financial crisis of 2008, the veneer of the polished financier has cracked. People outside the financial world now openly question the motivations of the men and women who are at the financial helm, both in corporations and government. Apart from a few minor casualties, the public's overriding impression of how investment bankers, traders, and corporate financial executives weathered the storm is business as usual, accompanied by large bonuses that are once again increasing. Correspondingly, the average person has become acutely aware of the fragility of his or her investment portfolio, which had been fattened by the unprecedented increase in the housing and stock markets. That these same portfolios, which represent future nest eggs, college tuitions, and security during retirement, could lose so much value so quickly was not part of the plan. No wonder those involved in the financial markets bore the brunt of the anger, fueled in part by fear of not having enough in old age and, more immediately, of losing one's home and livelihood.

As after prior financial maelstroms, public discourse attributes the seemingly cavalier attitude of those in finance to unabashed greediness—that "they" were only looking out for their own interests and ignoring the dangers to the general population. Executives have been called before congressional panels to explain what went wrong and why they were unable to safeguard the system. No one has been willing to take responsibility; there have been few convictions for any misdeeds, despite clear evidence that misdeeds took place. This callousness has not gone unnoticed. Two financial journalists, Diane Henriques and Sherree DeCovny, in separate articles broached the topic and alluded to specific individuals as potentially being financial psychopaths—a much more pointed and personal indictment than the usual accusation of being greedy, which has been made since time immemorial when those involved in finance have prospered to the detriment of others.

The inherent trust that is placed in financial agents of all ilk was violated, and the outwardly unrepentant attitude of those involved left many people wondering what to do and who to trust. Something had changed between those responsible for financial transactions and custodianship and the people dependent on them for managing their money. Although the 2008 crisis has been compared to the 1929 crash, several factors are different. At a market level, regulations that had been put in place after the 1929 crash had steadily been dismantled, rendering the markets once again more vulnerable. The structure and holding of most investment banks had evolved from private partnerships to publicly held corporations, with a subsequent shift in risk from partners with money on the line to shareholders hoping to cash in on the profitable investment banking industry. Trading had become computerized, with dark pools and algorithms reducing the need for human traders and their gut instincts; using artificial intelligence, computers learned from trading how to be better and faster the next time. Quants—those with doctoral degrees in physics, mathematics, and computer science—became the most sought-after job applicants on Wall Street. The traditional economics majors with broader liberal arts backgrounds from Ivy League schools or newly minted MBAs with finance concentrations became less appealing.

And it was not just the financial industry that changed. Since 1987, individuals had become responsible for their own retirement funds (called *defined contribution plans*), rather than being assured a set pension amount from their employers during retirement (known as defined benefit plans). This meant that average Americans started to pay more attention to what was happening to the market, as they now could see the connection between what was paid into their retirement accounts and how much they would potentially have for retirement. Americans were encouraged to buy their homes rather than rent. Policies in both the government and the banking industry enabled and rewarded homeownership. Underwriting standards were relaxed, resulting in more and larger loans to less qualified individuals.

The essence of the changes enumerated above was to shift a great deal of financial risk to the individual, who on average is unschooled in finance and has little understanding of how markets function. Most people make investment decisions by relying on advice from professionals and so-called financial experts in the media, as well as from friends and family. Running the system were (and still are) the financial and political personages, who carried less risk yet became vastly wealthier. Readers

familiar with the Modern Portfolio Theory (MPT) will note that this lower risk/higher return is an abnormal situation and one that unfairly favors the investment professionals; usually higher risk is compensated with higher rates of return. Thus, the structure of the system was such that it was not sustainable. Over the past 25 to 30 years, this complex interaction between individuals without financial expertise who believed that their financial well-being was being looked after, and the financial "masters of the universe" who had been schooled to make markets increasingly efficient, resulted in a toxic brew that left people wondering what had happened and why.

There is an expectation that people who steward money on behalf of others, that is, who have a fiduciary duty, are psychologically stable. To be otherwise would jeopardize the delicate structure of trust that a fiduciary duty entails. Even in 2013, five years after the start of the financial crisis, the Chartered Financial Analysts Institute, a professional organization to which many in the investment industry belong, was still struggling to shore up its reputation of integrity and trustworthiness. The target audience for this message was not those within the investment industry; rather, it was the public at large who still lacked confidence in the finance community. The idea that callous and untrustworthy individuals continue to run the investment industry today exists worldwide.

During the past two decades, the fields of behavioral finance and behavioral economics have slowly gained ground. Deemed not as glamorous as the quantitative side of finance by both academics and practitioners, behavioral finance seeks to explain how people interact with money, using cognitive psychology as the foundation and, more recently, drawing on neuropsychology. Both behavioral finance and behavioral economics account for the seemingly irrational human behavior in decision-making that was removed from economic models during the last century. Cognitive psychology focuses on mental processes—how people think about different events, situations, and so forth—and the resulting behavior. This branch of psychology fits well with the more rationally oriented economic and finance researchers, dealing as it does with more tangible factors. The inroads psychology has made into the field of finance has brought greater awareness not only to how individuals relate to their money, but also to how financial professionals approach their work. Research findings on the behavioral aspects of finance and economics are being used to craft policies to help individuals save more in their retirement accounts, as well as to inform algorithmic trading programs used by Wall Street professionals.

With advances in imaging technology, the cognitive approach has expanded to encompass neurophysiology through the use of functional magnetic resource imaging (fMRI). Researchers now watch activity in participants' brains as they engage in various financial tasks and games. The behavioral models that have emerged around financial activities thus far assume that everyone is neurotypical—that is, that the brain's neurological system is "normal." They also assume that everyone's behavior lies within the "normal" neurotic range. But what if someone lies outside the range or has a brain neurology that is not neurotypical or obviously abnormal? How does this change the models?

As fMRIs map the brain's response to financial situations, researchers seeking to push the boundary even further are investigating ways to tap the unconscious mind. Psychoanalytic theories are slowly seeping into behavioral finance and economics, seeking to explain the deeper role of the unconscious on both a collective and an individual level. Companies are employing archetypal focus groups in an attempt to unconsciously hook consumers on products—the Chrysler PT Cruiser that debuted in 2001 is one example. The Myers-Briggs Type Indicator tests based on the work of Carl Jung have been used for decades to find potential employees whose personality characteristics best match the job skills needed.

Certain psychological traits are seen as desirable when working professionally with money. For example, accountants who are more obsessive-compulsive with numbers, though not necessarily pathologically so, are highly valued as they are less likely to overlook errors when working through financial figures. On the other hand, a person who is interested only in his or her own welfare and is willing to financially hurt a client for personal gain is not, by most people's standards, a good fit for managing retirement portfolios. But a trading operation may value that same trait of self-interest in an employee, believing it drives the person to work harder to make more money, benefitting both the employee and the firm. Under the economic models that focus on rational self-interest, it makes sense that a person would put his or her own interests above others. No judgment is passed on how the trades are made; rather the bottom line is the overriding factor—how much profit has been made by the end of the day. In such a world, theoretically everyone wins. Thus, in the world of finance, the same psychological profile can be perceived as either an asset or a liability, depending on which segment of the financial industry is considering employing the individual.

Finance can be divided into distinct areas, each with a distinctive culture. Those individuals who display the desirable traits for a given

area will become integrated into that particular segment of the industry. Potential employees who want to work within a given area of finance will either inherently possess the preferred traits or will learn to mimic them in order to be accepted.

In the following chapters, we will look at the traits of psychopaths to see which ones are seen as desirable within the investment world. Researchers have found that a greater proportion of psychopaths are found in both the financial and public service sectors than would be expected statistically. This leads us to consider two related questions. First, are psychopaths behind the helm guiding the global financial ship onto another set of rocks? Second, is the culture of finance inherently psychopathic? Or are there other factors in play that have led financial professionals to act in the manner of psychopaths to the detriment of society worldwide? This book explores the world of finance, psychopathology, and other factors that might influence the presence of certain psychopathologies within the finance profession. Its aim is to discover whether the labeling of individuals as financial psychopaths is justified in the fallout of the 2008 financial crisis or whether men and women in the financial industry are simply a product of their culture.

2

Entry into the Universe of Finance

Very few people outside of the financial professions have a clear picture of what is encompassed within the universe of finance, other than the handling of enormous amounts of money. When *finance* is mentioned in conversation, the vast majority of people have an emotional reaction to the word. They mentally and emotionally link it to some abstract idea they hold about what the word *finance* means to them. Adults not professionally involved in finance may immediately think of their own personal finances. Regardless of how much wealth a person has, a common concern is whether there is "enough" money. An administrative assistant earning $40,000 a year may be less fearful of not having enough than the CEO whose annual salary is more than a million dollars. Both bring their own fears and hopes about money, which shapes how they interpret the meaning of *finance*.

Others may take a different, less immediately personal perspective, instead making an associative leap to the wealthy people portrayed in the media. The recent Wall Street protests in Zuccotti Park in New York City demonstrated a concern about wealth equality that touched public consciousness. The movement sparked similar protests across the globe in reaction to the increased accumulation of wealth by the top 1 percent of the population. Some critics opined that such wealth redistribution has come at the expense of the "little" man, negatively impacting society and requiring changes in compensation and business practices. Those who identify with the "little" man may feel inadequate and that they will never get ahead financially. In contrast, others hear the same news and it fuels their desire to be among those who have accumulated and control vast quantities of money with seeming ease. They do not want to be counted

among the majority of "little" men. Wealthy individuals, whose lifestyles are frequently idolatrized by the media, become visible role models for aspiring millionaires.

Young people who settle on a career in finance frequently do so with the sole intention of becoming rich. They are unlike their peers who are more entrepreneurially inclined—those college students who are passionate about something tangible and want to build a better mousetrap. Their primary purpose is not to become rich; wealth is a side benefit of their hard work. For the finance student, money is the passion and making more of it is the goal. How that is accomplished is less relevant.

To better understand the intentions, actions, and consequences put in motion by the financially ambitious young adult, the first step is to understand how such people are trained and what comprises the universe of finance that they will enter upon completion of their studies. With this grounding, it becomes possible to identify the types of individuals who would be attracted to the riches a profession in finance is rumored to offer. In this chapter, a brief overview of the field is given, focusing solely on corporate-oriented investment finance due to its special position as the home of media-sighted "financial psychopaths." Although other areas, such as public finance or personal finance, are also key to the workings of the financial universe by their very nature, they have not been singled out through media coverage as hotbeds for financial psychopaths and so will not be covered.

Finance, as a subject in its own right within university curricula, is relatively new. In 1958, Franco Modigliani and Merton Miller published an article entitled, "The Cost of Capital, Corporation Finance and the Theory of Investment," concerned with the separation of financing and investment decisions by firms. This article was published in the prestigious economics journal *American Economic Review*, providing the necessary widespread recognition the academy needed to acknowledge Modigliani and Miller's work as the seminal article establishing finance as a separate discipline from economics. Students pursuing degrees in finance are still required to take courses in both macro- and microeconomics, as traditional economic theory still forms the foundation for understanding how resources should be allocated to meet the needs of individuals and corporations alike. In addition to economic theory, finance curricula also require foundational coursework in statistics, mathematics, accounting, and, of course, finance-specific classes, such as corporate finance and investments. Undergraduate students at AACSB (the Association to Advance Collegiate Schools of Business)-accredited

colleges and universities are also required to fulfill coursework requirements providing them with a broader educational background outside the business focus, as it is believed that such knowledge will create better-rounded individuals.

The traditional three pillars of academic finance—corporate, investments, and intermediation[1]—offer students the opportunity to focus on one specific area within this broad and highly complex field. College students who decide to concentrate in finance rarely understand the breadth and depth of the discipline when they first select their major. Knowing that finance is related to money and being driven by the desire to "make (a lot of) money," they sign up for a course of study that frequently does not match their inherent talents and interests. It is not until later, when students have been exposed to the fundamental theories of finance, that they realize the degree of mathematical complexity involved in the discipline. The pillar of investments (where many students believe they can make the most money) is especially reliant on higher order mathematics. Once the realities of the academic demands begin to sink in, some students either switch to a less mathematically rigorous path or opt out of finance and into a different field of study.

Classroom Finance: Corporate, Investments, and Intermediation

All students majoring in finance are first required to take the basic corporate finance class. Until recently, enrollment was only permitted to juniors. Waiting until the start of the third year was considered necessary, allowing students the time to obtain a firm foundation in both micro- and macro-economics, statistics, and basic financial and managerial accounting. In the basic finance course, students are introduced to the basics of financial mathematics and given a broad overview of the fundamentals of corporate finance, covering a general overview of how to manage the finances of large corporations, including how to raise capital (both equity and debt) and how to calculate the corporation's cost of capital. Financial theories, such as the Capital Asset Pricing Model (CAPM), are also included in the basic curriculum, touching on the concepts of risk and return. Working capital management, with its focus on short-term money management, is given more or less attention depending on the focus of the finance department. General financial strategy is usually taught in greater depth at more advanced levels. As topics gain or lose popularity, emphasis is shifted to different areas within the curriculum, but the overall gist remains relatively consistent over time and

across universities. Given the time constraints when covering the large quantity of material, some fundamentals may be shifted into a second corporate finance class (also required) that goes into more depth. Newer concept classes are introducing students to finance in their first year of college, integrating both accounting and finance. The benefit of this type of class is that it offers students the opportunity to learn the mechanical fundamentals early in their studies and then spend more time focusing on the concepts and applications as they progress. The downside is that not all fundamental courses are completed before beginning a specialized program of studies, so that computations may be learned without understanding the reasoning behind the work.

Advances in technologically driven platforms also assist the student in mastering the mathematics behind finance. Online programs give students the opportunity to practice solving problems while obtaining immediate feedback, rather than waiting for time-constrained professors to finish grading and commenting on their handwritten homework submissions. Handheld financial calculators are necessary to make computations speedily during exams, a skill that will also be useful on the job. Microsoft's Excel program is a boon to managing large, complex cash flow problems. With the advent of an abundance of technology, finance students now have not only to master the financial concepts but also the technology that assists them in making financial decisions. The demand on students to absorb information quickly can be overwhelming, and cheating is not uncommon. Competition for the most desirable internships and jobs keeps students focused on maintaining high grade point averages (GPA), by whatever means they can. Stress is a frequently mentioned complaint that interferes with learning.

Students of corporate finance are taught management strategies for increasing the value of the firm, which is reflected in the stock price. From the first day in class, the phrase drilled into every finance student's brain echoes the ruling of the 1919 court case of *Dodge v. Ford*: their goal as financial manager is to "maximize shareholder value." Akin to maintaining the highest GPA possible, these neophyte financiers are expected to use whatever means available to them to continually increase shareholders' wealth each quarter. When Wall Street equity analysts publish expected earnings numbers for companies, they expect the company to hit the target number. If a company misses its target, the stock price will drop. On a practical level, maintaining a stock price within a reasonable range (or having it increase) provides an equity market value for the firm, which is in turn used to calculate the cost of capital. The market value

of the firm and the cost of capital have a tautological relationship, each being dependent on the other. Thus, for firms that wish to raise capital, it becomes necessary not to have the market value of their shares drop below a reasonable range—otherwise capital becomes significantly more difficult and expensive to obtain. As a consequence, financial managers who assiduously watch Wall Street's reactions will endure all sorts of financial and accounting machinations to meet "The Number."

In practice, some of the methods used to accomplish this are dubious at best, while others are downright fraudulent and illegal. A prime example, and one that led to the passage of the 2002 Sarbanes-Oxley Act meant to increase transparency to prevent such practices, is that of the energy corporation Enron. The company was an investor favorite with its ever-increasing share price, resulting from ever escalating profits on the financial statements. Due to accounting improprieties surrounding how energy prices were booked, the firm was nowhere near as profitable as it appeared, and its business model was far riskier than supposed. Shareholders lost billions of dollars once the market understood the enormity of Enron's duplicity. Employees lost their jobs and retirement funds, all invested in the high-flying company. The corporation's esteemed accounting firm, Arthur Andersen, was also brought down in its wake. A number of top executives involved with Enron were indicted, convicted, and sentenced to prison terms, with the exception of Kenneth Lay, who died prior to standing trial.

Apart from chasing after "The Number," there exists a more personal motivation for corporate financial managers to remain mindful of analysts' predictions for their firms' future earnings: bonuses and compensation are often closely linked to stock performance. This relationship, in turn, has the potential to lead to upper management making less-than-optimal long-term strategic decisions on behalf of the firm and its shareholders. A focus on increasing short-term earnings figures may thus take precedence over more beneficial longer term strategies that do not have such large, immediate windfalls for management.

Issues relating to compensation of executives and managers fall under the heading of corporate governance, a popular topic today, but one addressed infrequently at best in the early days of finance. If students wish to specialize in this area, they find that the relevant research tends to focus on how to incentivize managers to act in the best interests of the firm, and the best ways to reward them appropriately for their work. This in turn has increased awareness of the impact of accounting practices that are used for calculating earnings when developing financial

statements. For students and professionals alike who are well-versed in both accounting and finance, opportunities exist in the evolving disciplines of forensic finance and accounting, both of which seek to uncover fraudulent practices and increase overall financial transparency. More recently, further research in corporate governance has begun to examine other factors, such as gender differences in management style and board composition, relating these to their impact on firms' performance and hence, stock price.

The counterpart to corporate finance within the traditional curriculum is investments. Much of what is learned in corporate finance can be applied to investment analysis, as both areas focus heavily on the potential cash flows that can affect a given firm's value, albeit from different perspectives. When students consider if either of these routes appeal to them, they need to take into consideration whether they want to be working within one particular corporation or doing analyses of different corporations from the outside. If working from the inside appeals to them, then students may decide to be financial managers. As such, they will become responsible for running the financial activities of the company, including managing the mechanics. Their overriding responsibility is to increase the value of the firm for the benefit of the firm's shareholders. Additional coursework in accounting and cash management becomes part of their course of study, as well as strategic financial management classes.

By contrast, investment managers who work from outside the corporation are looking for firms increasing in value so that they can profit from an increase in their stock price. However, if, through their analysis of a corporation, an investment professional believes that the firm will decrease in value, he or she can take advantage by implementing other trading strategies designed to create a short-term profit despite the decrease. Corporate financial managers are not in such a simple position to benefit from of a downturn in their companies' fortunes—they have to reposition the firm so that in time the firm can realize greater cash flows. Both corporate and investment managers rely on information to position themselves accordingly in their attempts to benefit financially from how the corporation is expected to perform.

Thus, it should come as no surprise that, within finance, information is money. Asymmetrical information—the idea that insiders in companies know more than those outside—was a concept explored extensively in academic financial research during the mid to late 1980s. The general idea is as follows: if an investment manager or trader knows ahead of time

what the (inside) financial manager of a specific firm plans to do, he or she can take advantage of that information by changing his or her investment strategy for that firm. For example, if the investment professional believes that the price of shares will go up based on information not yet known to the general public, the investment manager or trader could buy shares in the firm while the price is still low and then sell after the anticipated rise. Such trading on information not available to the public is considered to be taking advantage of "inside information," which has been (unsurprisingly) shown to give consistently abnormal positive returns. Within recent memory, Martha Stewart was charged in 2003 with insider trading for selling shares in ImClone Systems, Inc. in 2001 after receiving a tip from her broker. Knowing that the CEO was selling his own shares in the company prior to information being made public that the firm would not be receiving FDA approval for a key product, the broker helped Stewart sell before the anticipated drop in stock price. For her actions, which included lying to authorities, Stewart was sentenced to a five-month jail term, after which she was required to wear an electronic ankle bracelet for another five months so authorities could track her location at all times. The fines and fees Stewart paid in settling the case far exceeded the total amount she avoided losing—a mere $45,673.[2]

Laws prohibiting insider trading have been instituted in most major markets worldwide, with the United States being a leading proponent of such laws. Radio, television, or Internet broadcasts containing information deemed material (i.e., affecting the stock price) are supposedly dispatched simultaneously to the public to prevent unfair advantage. Yet, with billions of dollars at stake for being able to move before information becomes public, such equality has a price. Computer programs to detect changes in voice tone and facial movements are now employed in an attempt to uncover information conveyed by the narrator subconsciously, in the hope of gaining an advantage in the market, however small. Scanning these public broadcasts for clues in the rhetoric, tone, and body posture is not considered to be insider trading. In response to these analyses, many modern CEOs, who are often responsible for delivering critical new information, are now being trained to deliver information in a monotone with a poker face. Steve Jobs, the former CEO of Apple prior to his death, had carefully trained himself and those around him not to deliver any hints regarding forthcoming products. However, he took a showmanship approach more befitting to his personality when disclosing material information about the company in a public venue.

Material information is also conveyed through print media and the Internet. Again, laws require that no one person or entity can receive the information before its release. In September 2013, it became apparent from trading patterns emanating from Chicago that material information provided by the Federal Reserve was made available to some groups of investors ahead of the general release. When investigating the source of the potential leak, it was discovered that computers in Chicago were trading milliseconds ahead of computers in New York City, from where the news was being transmitted. This discrepancy in trading times implies that the information was released some milliseconds earlier to Chicago traders, giving them fractional milliseconds of informational advantage on which to trade. The amount of trading relating to this seemingly inconsequential timing differential is estimated to be around $600 million.[3] This is a new twist to trading, requiring further refining of the concept of what comprises insider trading. It also underscores the importance of information and its subsequent release into the public domain.

The information gathered through various publicly available sources is used in valuing companies and is traditionally analyzed by taking either a market-based approach or a more traditional fundamental analysis. The latter is taught from both the investment and the corporate perspective. It relies on both reported financial information prepared using Generally Accepted Accounting Principles (GAAP), as well as other factors relevant to the company as an operating entity to determine its value. In this type of analysis, the business fundamentals of the firm—products, demand, market share, cost of inputs—in addition to the balance sheet and income statement of the firm, are used to project what the expected line items will be; at the end of the day, the analyst will have created a value of the firm based on the macroeconomic environment, the industry, and the firm itself. Buy and sell decisions are based on whether this calculated value is more or less than the stock's current market price. Warren Buffet, the well-respected CEO of Berkshire Hathaway and successful investor with a personal wealth in the billions of dollars, uses fundamental analysis when assessing whether a company is fairly valued, or whether it would be a good deal. Most universities focus on fundamental analysis when teaching techniques for stock valuation, and most financial analysts have a solid grounding in these techniques. As a result, the majority of analysts employed by Wall Street firms are familiar with and include this type of analysis when valuing companies.

Specific to investment courses is the market-based technical analysis used for stock valuation, which frequently falls under a securities trading

class within the investments track. Technical analysis, in contrast to fundamental analysis, draws on market data relating to trading of the stock itself to analyze how a stock is doing within the context of the market. Momentum, volume, moving averages, and a host of other indicators are used to determine when to move in and out of a stock. Charts and diagrams are the stock-in-trade of technical analysts; the information from them can be easily programmed to assist in making trading rules. On Wall Street, technical analyst numbers dwindled when Modern Portfolio Theory first became popular, but gradually increased again in the 1990s when firms began the practice of including one technical analyst on individual equity teams. With the rise of programmed or algorithmic trading, information gleaned from technical analysis is among the elements considered in determining when to execute trades.

Although both of these methods of valuation are used in investments for framing an investment or trading strategy, derivatives are employed to eliminate as much risk as is possible. Simply put, a derivative is based on a specific asset; its value is tied to five factors: the value of the underlying asset, the price at which the derivative contract can be exercised, the interest rate, the volatility of movement in the underlying asset, and the time before the expiration of the derivative contract. For example, the value of a call option to buy Apple stock at a specific exercise price is based on what happens with the price of Apple stock trading in the market. The option, however, will cost less than the share itself. Options thus allow investors to participate in the movement of Apple's stock without actually having to buy the more expensive shares.

Fischer Black and Myron Scholes' model, published in 1973, initiating the widespread use of derivatives, is now known as the Black-Scholes Option Pricing Model. This mathematical formula provided a model for pricing derivatives. Robert Merton subsequently made further refinements to the model, and both Scholes and Merton were recognized for their work in this area when they were awarded the Nobel Prize in Economics in 1997. Unfortunately, Black died prior to the award being presented, though his invaluable contributions to it were acknowledged. Black's passion for his work was obvious when meeting him in person; one could tell from the way he spoke that he was always thinking of how to improve his analytical models. Derivatives are now constructed on anything that has value—stocks, futures contracts, currency rates, collateralized debt obligations (including mortgages)—the list is far reaching and bounded only by the imagination and willingness of someone to write the contract and bear the other side of the risk. This type of work within

finance is part of the field of financial engineering, although it still frequently can be found under the broader category of investments.

Although derivatives can be used to mitigate various types of risk resulting from daily business activities found within corporate finance, they are used far more extensively for risk management and speculation within the investments arena. Applications of derivatives within corporate finance have expanded to include using the Black-Scholes Option Pricing Model to assist in valuing projects that firms are considering undertaking. Given the broad scope of use in multiple facets of finance, derivatives has become a topic within its own right, often being paired with risk management. The mathematics behind derivatives is far more complex and requires greater computing power than other areas of finance, which is one of the reasons physicists and mathematicians, with their extensive quantitative training, tend to be drawn to work in this area. The financial rewards of applying their well-developed mathematical skills to derivatives far exceed the usual compensation earned by staying within their primary field of training. More about this interesting trend and its ramifications within the larger market will be discussed in chapters 4 and 5.

Finally, even though many firms participate in the global marketplace, international finance has had a history of being relegated to an afterthought within corporate or investment finance classes. International finance classes are unusual in that they can be structured in many ways. If the focus were on corporate finance, such a course would cover how to manage international trade and management of cash flows in multiple currencies, along with transfer pricing and international taxation strategies. Given the complexity of each of these issues, the topics are better approached within an international finance class dedicated to these specific areas. International investing can be approached from a trading perspective focused on the currencies themselves and the multiple strategies for mitigating risk, including hedging currency risk with various derivative contracts. Investing in stocks and bonds from an international perspective did not garner much attention until Bruno Solnik's 1974 (and subsequent) papers, in which he showed that, when holding international stocks within a domestic portfolio of securities, the level of risk for a given level of return was reduced.[4]

This brief overview has covered two of the three pillars of finance commonly taught today—corporate and investment—which are both focused on the value of firms and how to mitigate risk. The third pillar, intermediation, is focused on raising money through general banking

activities. It is linked to the role played by commercial banks and other groups of investors who act as lenders to corporations, governments, small businesses, and individuals. At one time, the activities of savings and loan institutions fell under this heading, providing education related to mortgages. Few universities offer extensive courses in this area. Much of the training specific to commercial banking is done in-house at the banks themselves. That said, the fundamentals of debt markets and the theory of interest rates central to intermediation are included in both corporate and investment classes.

Learning Finance: Discovering Wall Street Firsthand

Aspiring financiers' first realization that what they have learned in the classroom is only a small part of what their future career will entail often occurs in an internship or a class that takes them into the offices of Wall Street and its environs. The reality of the day-to-day activities involved in an entry-level financial job is far less glamorous than the Hollywood portrayal or any fantasies that may have taken hold. Crossing this bridge from classroom to practice is when many students encounter their first reality check. Critical to performing well on Wall Street is the ability to understand the business of business. Being able to "crunch the numbers" is necessary, but not sufficient to excel. Understanding the theory behind the number crunching has received less emphasis over the past two decades, in part due to the larger body of knowledge within the field and also as a result of the emergence of technology as a critical component of finance. With compressed time in the classroom to teach both the increased knowledge base *and* the technological applications, the focus of textbooks has shifted toward mastering Excel spreadsheets and financial calculators—at the expense of theory and derivation of formulas. Less time exists within curricula to devote to corporate issues involving practical financial management concerns, such as short-term cash management or other treasury functions. During the 1980s, Eugene Brigham had the leading finance textbook, which focused on these types of practical, managerial finance issues, considered critical for producing competitive corporate finance graduates. This material has been minimized, displaced by applications that focus instead on risk and the Capital Asset Pricing Model.

Business cases, such as those made available by the publishing arm of the Harvard Business School and Darden in Virginia, are used to stimulate critical thinking skills in the classroom by asking students to place

themselves in the position of a CEO or CFO facing a specific financial or management dilemma. Students are provided with the relevant information that a decision maker in the same situation would have in real life and then asked to explain how they would approach the problem. The benefit of working through the cases is to develop the skill of the students to think through unfamiliar situations, using tools they already possess. The goal is not to find the "right" answer. Possible solutions tend toward shades of gray, as is the case in the real world, rather than black-and-white, textbook answers. Unfortunately, with the widespread availability of information on the Internet, enterprising students can find ready-made solutions to the cases, thus circumventing the critical learning skill component. In addition to using case studies, more universities are offering opportunities that include both experiential classes and internships, giving undergraduates and graduate students a preview of what lies ahead for them after graduation.

Experiential classes directly expose students to financial centers through visits to a variety of financial firms and institutions. Such classes provide an unparalleled opportunity for students to talk with professionals currently employed in the industry. Those people willing to engage with students have already gone through the educational training and grueling job-seeking process that await hopeful graduates. Speaking from experience on location lends an air of credibility that has more impact than a professor in a classroom saying exactly the same words.

Although the American investment banks have expanded their domain, spreading their practices and culture worldwide, Wall Street is still seen as the embodiment of American capitalism, the financial hub of the universe. Consequently, many domestic experiential courses in finance offered by universities include an excursion lasting from one to five days on Wall Street in New York City. Once there, students discover that after 2001, many of the financial firms moved some or all of their operations across the river into New Jersey. So visiting Wall Street may also involve traveling to less well-advertised and more mundane locations nearby. Other cities in the United States, such as Charlotte, North Carolina, have also seen an increase in the presence of financial firms. While not Wall Street, many of the same investment banking houses have operations that can provide a view into the everyday activity of financiers for students. Away from the East Coast, Chicago and San Francisco both have flourishing financial centers. More ambitious programs may be international in scope, traveling to well-known financial centers in cities such as London and Hong Kong. Similar to their domestic counterparts,

international financial operations have sprung up in less well-known locations. For example, students trek around the globe to visit and participate in microfinance operations in African, Indian, Asian, and South American cities and villages.

When universities offer students the opportunity to visit Wall Street, the included series of firm visits and networking events ultimately provides them with a glimpse of the inner workings of firms. By the end of their time in New York City, students either love the pace and lifestyle or come away strong in their desire to seek a different career path. In the pages that follow, we will walk through a typical schedule in this type of "Wall Street" class in order to gain some insight (much as the students themselves discover), regarding the various types of jobs available, expectations for employees, and, ultimately, the personality types that frequently fit these positions.

It should be mentioned that before 2001 and the attack on the World Trade Towers, firms were open and willing to host informational sessions with students. During a site visit, alums from a given university would talk about their own experience and offer advice to those students who wanted to work on Wall Street—what they should know and how to go about getting there. The same holds true today, but now security prescreening is required at all companies. Once on site, more security measures have been implemented, introducing the students firsthand to the present-day realities of working in the financial center of a capitalist society. The New York Stock Exchange (NYSE) serves as a good example of the changes that have occurred. Prior to 2001, the New York Stock Exchange was an exciting place to visit. Tours would include a stopover on the visitors' gallery overseeing the trading floor and sometimes even visiting the floor itself at the end of the day. Amid the hubbub and excitement of thousands of traders focused on making money and screaming into the phones, the floor littered with pages of discarded paper to be swept up overnight, students were enthralled by the frenetic energy. After 2001, security tightened, and students saw firsthand the impact of the terrorist attacks on how business was conducted. Barriers were erected outside the Exchange and lines were formed to gain entrance, passing by security guards and through metal detectors. Seven years later, after 2008, students witnessed the aftereffects of the devastation wrought by the global financial crisis, experiencing the accompanying decline in morale and empty trading rooms at firms they visited. Yet prior to the attacks in 2001 and even during the seven-year period of high security that followed until the 2008 financial crisis, what seemed to captivate

students the most was the intoxicating esprit of being at the center of the financial universe, the heart of where big money was being made. Today a more reserved and sober atmosphere permeates the mood on Wall Street, in some ways a backlash to the attention wrought by the hyped-up media and public demands for transparency following the global financial crisis. Greater attention is being devoted to regulatory changes and their subsequent impact on future business dealings. The bacchanalian frenzy of the past has subsided.

Stepping back for a moment to reflect on why Wall Street exists will provide an orientation for this brief tour. Wall Street's original function in the late 1700s was as a meeting place: to bring together people with excess funds and those seeking to raise money for business ventures. Meeting in a central location meant that deals could easily be brokered between the parties; it was relatively simple for providers and users of capital to speak face-to-face. Those needing capital could make their pitches and deals directly with the people supplying the cash. The resulting contracts included provisions for repayment with compensation for the use of the funds over time. Middlemen soon emerged who could bring together a provider of capital with someone needing capital—for a fee. A secondary market also developed, devoted to helping those who needed to get back their money sooner than their original contracts called for. These markets continued to develop over the next three hundred years through advances in technology, which have increased both the speed and complexity of the markets and transformed them into the markets observed today. The results of these changes will be discussed in further detail in chapter 4. On one level, the markets are continually transforming to meet changing market conditions and regulatory demands. Yet their primary functions have remained unchanged: first, the need to raise capital for new and growing businesses; second, the need to invest monies on behalf of others; and third, the need to manage risk effectively. These functions are presently carried out on behalf of clients, companies, and governments (collectively known in finance as institutional money), rather than individual investors, with average traded amounts starting in the multimillions and easily stretching into the billions of dollars.

These amounts far exceed that which most individuals are accustomed to handling, and so it is the responsibility of prudently managing these large sums of money over time that affects the large compensation packages earned by those in the Wall Street milieu. Imagine, for a moment, that you are asked to steward a $4 billion portfolio of retirement funds on behalf of several tens of thousands of people whom you don't personally

know. You are expected to ensure that this portfolio earns a reasonable rate of return each year so that the investors will have enough money in their accounts to retire comfortably 30 years hence. An onus exists in carrying out this charge effectively over an extended period. There will be uncertainties specific to the investment vehicles themselves. Moreover, changes in the economic environment, both imaginable and unimaginable, add to the uncertainty surrounding the return you are charged with obtaining. Compensation for this work needs to be balanced with the portfolio's achieved performance so that all parties benefit in an equitable fashion. Receiving a flat salary of $150,000 per year whilst helping the portfolio achieve a one-year 10 percent return (in this case, equivalent to an increase of $4,000,000) seems disproportionate, hence the practice of awarding bonuses at year-end for good performance during the year. In later chapters, we will examine how in certain areas of Wall Street the pervasive culture forms a supportive framework, making it easy for employees to fall into the trap of believing themselves justified in taking more compensation than deserved.

Returning our attention once again to the tour, we find excited students walking down Wall Street for the first time, eager to visit 11 Wall, the home of the New York Stock Exchange. The building housing the Exchange represents the historical heart of stock trading and to many is Wall Street. Outside, tourists and other groups of finance students pose for pictures in front of the Exchange, while well-groomed men and women in tailored suits stride past, coffee and cell phone in hand. Once past the intensive security systems put in place post-2001, students discover a much quieter exchange floor than the pictures portrayed in the media. No longer are dealers and brokers talking face-to-face to make deals around trading posts. Instead, designated market makers (DMM) in a given stock hang around their posts, monitoring computer screens that provide a continuously updated array of information. News from a variety of sources, trading taking place in different venues worldwide, along with any other information that could influence price movements is watched closely throughout the day. Designated market makers still talk with brokers face-to-face, but this occurs predominately at the day's open or close, when the majority of activity is taking place. Otherwise, algorithmic trading programs kick into action, busily taking over the floor with trades conducted faster than possible by humans. On the periphery of the floor, brokerage firms with licenses to trade on the Exchange now have small booths to run their own algorithmic trading programs, executing trades on behalf of their clients as well as for their

own proprietary accounts. This electronically driven trading accounts for the majority of trades now both on the Exchange and in electronic communication networks (ECNs), discussed further in chapter 4. From an all-time high of over 5,000 people actively working and crammed onto the floor making deals, there are now only around 1,000 people occupying the same area. Some financial news programs are even allowed to broadcast directly from the floor to fill the void, with one show setting up its studio directly in front of the central balcony, where the trading bell is rung. This growing theatrical aspect of Wall Street that is broadcast internationally has not gone unnoticed by researchers at Bucknell University. They argue that Wall Street has become a narrated story, in which media commentators are the storytellers "summarizing, making sense of, and explaining actions that transpire on Wall Street."[5]

Students learn firsthand from this experience that trading has shifted to electronic venues and that the traders who once did business on a handshake alone have become a dying breed. The world of algorithmic trading is firmly established, with quants (people with exceptional mathematical skills, often the physicists or applied mathematicians mentioned before) writing the software that drives trading. The New York Stock Exchange has become a symbol of investing rather than the vibrant, physical trading space portrayed by the media.

Following this introduction to Wall Street, students next visit companies, usually starting with the renamed investment banking houses, now known as universal banks. Goldman Sachs, JPMorgan Chase, Morgan Stanley, and Citigroup, to name a few, all maintain offices in buildings around New York City and its environs. After the financial crisis, the investment banks still in business were disbanded via newly instigated regulations. Bear Stearns and Lehman Brothers, both leading investment banks prior to 2008, entirely ceased to exist. Remaining institutions became universal banks, still performing many of the same functions as investment banks but with an altered organizational structure and different regulations and oversight. The implementation of new legislation—such as the Volcker Rule that bans proprietary trading—means that banks can no longer trade for their own accounts. The purpose of rules such as these is to stem speculative trading by the banks for their own accounts using client funds, which supposedly reduces the risk profile of involved banks.

For many finance majors, the most coveted job is that of investment bankers, even without knowing exactly what they do. What students do know about investment bankers is that they make a great deal of money,

and that is often the impetus for becoming a finance major. Investment banking falls under the category of corporate finance on Wall Street, not intermediation or banking, despite its name. The purpose of investment banking is to help corporations raise capital as well as offering advisory services (for large capital investments, including mergers and acquisitions). The fees attached to these services used to run as high as 10 percent of the total amount being raised, providing much welcome profitability for the bank. Nowadays fees are much lower, and, with much less activity occurring, these services are no longer driving profits. Technical skills that investment bankers need to possess include the ability to value companies so that they are able to advise on a variety of issues related to financial strategy. Perhaps the most well-known example is when a company wants to go public and sell its shares in the open market by listing on the New York Stock Exchange. An investment banker will provide a value for the company, assess the demand for its shares, price it accordingly, and guide the company to market.

During the 1980s, the hot topic was M&A, mergers and acquisitions, as this was where the big dollars lay within corporate finance. While it is still true today, the sheen has dulled. Fewer deals are currently being made. However, the mergers and acquisitions business tends to be cyclical, so at some future point, the market will undoubtedly rebound as companies regain confidence in the economy. The basic concept behind mergers and acquisitions is that, if you can figure out a deal and sell it, you too can be on your way to untold wealth. This is the bailiwick of investment bankers, who happen to be very knowledgeable about balance sheets and financial strategy. Investment bankers are good at figuring out where value might be created by putting together (or taking apart) companies and in return are paid handsomely for their work. Those who are not as adept with working out the mathematics of the deal but possess good people skills can sell the deal.

Many investment banking houses offer introductory analyst positions to graduates straight out of university, usually through a two-year training program.[6] The hours involved are grueling during these two years—working 80 hours or more per week is normal. Most young professionals will readily admit there is no work/life balance, but rather a work/work balance. The pay during these first two years is not phenomenal and, considering the cost of living in New York City, is usually just enough to break even on expenses. It is at this point, after hearing from the first-year analysts, that only students who desperately want to work on Wall Street continue to seek such a position. After two years on the job, there is the

possibility of going back to business school to obtain an MBA. If invited, some analysts choose instead to stay for a third year, hoping that their work is good enough to land them a promotion to the next level without the degree in hand. It is a physically and intellectually challenging time for those who choose this route, but the future payoffs can be quite handsome. The pressure of performing successfully under consistently short deadlines can also result in a variety of personal problems, as people find ways to cope with the constant stress. Being aware of the pitfalls that others before them have succumbed to, many promise themselves they will leave as soon as they have accumulated a certain amount of money. They essentially resign themselves to enduring some unspecified years of hard work, long hours, and stress in order to quit at some point in the future with a large lump sum of money in hand. The question, “How much is enough?” which seemed innocuous and simple in the beginning, becomes more nebulous and difficult to answer as time passes.

Also within the universal banks are trading and research divisions. The law requires separation of research and sales functions to avoid any conflicts of interest. Trading takes place on behalf of clients using a variety of securities, including equity, debt, foreign exchange, and all types of derivatives. Both large institutional clients and smaller retail customers are accommodated. The research team provides analysis on the various securities, which the traders then incorporate into their strategies. When we examine the culture of Wall Street in more detail in chapter 3, we find that there is a distinct difference in personality between those who choose to go into trading compared with those who prefer to be in research. On the trading side, there is a further distinction between those who are buy-side traders and analysts and those who have the same positions but on the sell side. In addition to people with good technical and quantitative skills, salespeople are also needed to engage clients and maintain relationships with them.

Global treasury is yet another division that is under the umbrella of services provided by universal banks. Here a whole range of services is provided to help corporations with their international dealings. Foreign currency, risk management of foreign currency exposure, trade finance, and transfer pricing all fall under this group. Following informal meetings with representative alumni from the various divisions, students discover they can have a range of interests and financial abilities and still find a place within an investment banking house should they so desire.

During their time in New York, students are often surprised at the number of smaller shops or boutique firms specializing in one or more of

the same functions as performed by the universal banks. New graduates will often endure the entry-level training programs provided by universal banks, because it offers them training that will be readily accepted by smaller firms with less frenetic lifestyles. Some of these boutique firms specialize solely in asset management, meaning they will buy securities and construct portfolios on behalf of institutional clients. Depending on the size and needs of the boutique firm, they may even have a small trading desk or outsource that function to a brokerage firm. These small firms seek out research analysts who focus on specific sectors of the market, as well as portfolio managers who can put securities together in portfolios designed to meet the specific needs of their clientele. An endowment fund, for example, may select several small boutique firms to manage different sectors of their overall holdings. One firm may specialize in domestic mid-cap equities, whereas another will focus on fixed income, and yet a third, on international large-cap equities.

Private equity firms also manage funds, though rather than trading shares, they will buy entire companies. The goal of private equity funds is not to hold these privatized companies for a long period. Instead, their mission is to improve the performance of the company, then sell it at a higher value after several years. This is easier to accomplish once a company is no longer publicly traded, as a private equity firm can reorganize the company without public scrutiny or need for shareholder approval. Changes can be made to capital structure, as well as replacing ineffective management and poorly performing strategies. One well-known company that demonstrates how private equity firms work is Burger King. This competitor to McDonald's was originally privately held before being sold in 1967 to the US-based Pillsbury Company. Pillsbury's management was unable to compete effectively and sold the burger chain to the United Kingdom's Grand Metropolitan PLC after eight years. By 2002, Grand Met (now Diageo PLC) had given up on the company and sold it for $1.5 billion to the private equity company Texas Pacific Group (TPG) and their partners, Bain Capital and Goldman Sachs. After four years, TPG Capital successfully took Burger King public in 2006. Four years later, in 2010, Burger King was bought once again, this time for $3.26 billion by the private equity firm 3G Capital.[7] By removing Burger King from trading in the public domain, 3G Capital is hoping to transform Burger King once more without having to meet earnings expectation demands by Wall Street analysts.[8]

Hedge funds, though less prolific than they used to be prior to the financial crisis, still have a role in the financial marketplace. Such funds

provide specialized investment strategies for institutional investors and qualified investors, among other services. Positions with hedge funds have a mathematical focus and are not usually entry-level positions for recent finance undergraduates.

At the other end of the spectrum, investing positions are also available within corporate social responsibility (CSR) divisions of firms. These departments are usually not as well funded as those previously mentioned and are not treated as revenue centers, per se. Microfinance is one such niche found within CSR departments, both in banks and regular corporations. There are also stand-alone microfinance companies, but they tend not to be found on Wall Street. Firms engaged in microfinance hope to assist in building up the economic base within those countries where they invest by searching for opportunities to lend money to the lowest end of the socioeconomic spectrum. For example, microfinanciers might lend a total of $1 million within a developing country to help rural women start small businesses. This seemingly small investment will have a ripple effect, gradually improving the overall economic situation around the location of the initial investment. With a longer payback period necessary for this particular type of investing, the assessment of where and to whom to lend becomes more involved. Students who are drawn to microfinance are often as interested in the people aspect of finance as in the financial side.

Finding the Right Match

From this brief glimpse into both finance classrooms and the real-world experiential Wall Street classes that prepare students for their careers in finance, we can see now that there are a variety of positions available in the universe of finance. After being exposed to the breadth of employment options available, students will gradually begin to sort out the pecking order of the firms—which is the most prestigious, which is the toughest, which offers the best prospects for starting a career—and then within a given firm, in which department do they ultimately want to work. Not all students are fortunate enough to get their first choice upon graduation, but they have a better understanding of how to get to their desired destination using a less direct route and are more aware of potential roadblocks.

Many students who decide to major in finance do so because they think it is an easy way to become wealthy fast. These students want to know the secrets of making money in the stock market—a premise that

has sold millions of books since the stock markets first began. Corporate finance for this type of student is considered too boring—a steady job with a steady paycheck. The exception is investment banking, long considered the fast track to wealth. Unfortunately for those who did not attend the most prestigious or highly ranked universities, it is dominated by graduates from Ivy League schools and therefore difficult for those outside this social circle to break in. Consequently, the favorite finance area in which to concentrate is investments. Anyone can do it; any number of books would tell you all you need is access to a computer for trading and to know which stocks you want to trade. But as the students themselves would say—wrong! With the advent of Modern Portfolio Theory (MPT), technical analysis with its charts and other visual representations of stock movements has diminished. As we have already seen, the area of investments has become heavily quantitative, requiring stronger math skills than many aspiring financiers possess. Additionally, a complexity in the markets has emerged of which most people are not aware. Stocks are just the tip of the iceberg—variations on different ways to hold stocks (mutual funds, ETFs, domestic, international), bonds, commodities, derivatives of all types, and real estate (as stocks or actual buildings) exist, to name a few of the traditional first overview of investment possibilities. Learning to value each of these instruments requires more than basic addition and subtraction, or even high school algebra.

Many students find the mathematical hurdles too high and thus seek refuge in the less mathematically oriented aspects, relying on their classmates who excel at formulas or are computer whizzes to help them through. Their handheld business calculators, once mastered, lessen the need to understand the mathematical underpinnings of the work they do. Punching in the appropriate numbers and pushing the right buttons will give answers in under a minute. Assessing whether the resulting numbers are correct and how to interpret them is a skill that requires a comprehension of the fundamentals of finance. One of the current complaints voiced in a recent article in CFO.com[9] is that finance students are adept at crunching numbers (not surprising, given the recent shift in textbook emphasis), but not competent when it comes to understanding how to use calculations for formulating strategy or even how to discuss what drives a company's financial performance. Computers and their accompanying array of software, which have become more user friendly over the years, are necessary to handle the large quantities of data involved in the modern investment arena. Students must become proficient at using spreadsheets and understanding how to use formulas appropriately, even

if they don't understand exactly what the formulas do. Being able to push the right buttons is worth something. Students who enjoy the world of finance but don't possess the best mathematical skills can become valuable team members by building relationships with clients and still do well for themselves financially.

On the other hand, those students who are mathematically inclined and enjoy working with computers have several options. Firms on Wall Street actively seek out well-qualified candidates for positions that require expertise with computers, and not just from a finance perspective. Superior proprietary trading programs are the lifeblood of financial firms, needing continual monitoring and updating. With increased online activity in all aspects of the business, computer security is paramount. Students who wish to focus on finance with greater emphasis on mathematics using technology as a tool can continue their education and obtain a Master of Science in finance. These degrees have proven beneficial to both the universities offering them and to the companies hiring the graduates. Students come out prepared to model complex financial problems after 12 months, without the added years of further education entailed with doctoral training. The resulting supply is thus more abundant than that of financial doctorates, and, if further training is necessary, it can be accomplished in-house with a more customized approach.

It is not just educational background and commensurate skills that determine where a newly minted graduate will set his or her sights. Different personality types fit better in certain areas—a more reserved person who enjoys modeling will be far happier and more productive in a research position than out on the trading floor. Outgoing, gregarious individuals who thrive on human interaction would not do well sitting in front of a computer screen, modeling interest rate movements all day. There is a need for both personality types within a given financial company—the key is finding the appropriate department or division within the firm that provides a match for both employee and employer.

Underlying the fit with any financial firm is the cultural environment within the firm. This is not something that is taught in textbooks or discussed at great length in the finance classroom. Students only become familiar with Wall Street's cultural nuances by visiting the firms in person. One such nuance is the "pink ghetto," the name given to municipal bond departments that were primarily staffed by women, who are traditionally paid less. Ambitious men would avoid the pink ghetto, which was relatively easy to do during the heyday of the corporate bond markets of the late 1980s. One bond trader commented at the time that he

would never have deemed to "stoop so low" as to work in the municipal bond market. However, when the corporate bond market experienced massive layoffs in the United States, his opinion changed, and he was thankful to end up in municipals—at least he had a job. Microfinance, while providing benefits to society as a whole, has acquired this same reputation. It is perceived as being less prestigious, and hence a much less attractive career path for those desiring to make their mark on Wall Street and emerge with personal wealth. Delving into the cultural aspects of the financial firms on Wall Street in the next chapter, we will discover that each firm has its own unique culture that attracts certain personality types and repels others.

3

The Impact of Culture

In her 1934 book *Patterns of Culture*, American anthropologist Ruth Benedict was a vocal proponent of the idea that each culture chooses from a "great arc of human potentialities" in selecting which personality traits will embody that culture. She noted that "[t]he life-history of an individual is first and foremost an accommodation to the patterns and standards traditionally handed down in his community . . . its habits are his habits, its beliefs his beliefs, its impossibilities his impossibilities."[1] From the last chapter, it has become apparent that there are obvious distinctions between the various sectors of finance and also within each of the areas. Furthermore, individual firms within the investment arena seek and attract certain personality types, which in turn make up the unique culture of a particular firm. At an even more refined level, differences in personality types between customer-facing and backroom research positions are readily apparent. To grasp these cultural nuances, experiential classes that literally "walk down Wall Street" are necessary for aspiring finance students if they are to fit seamlessly into the environment of which they strive to be a part.

Before we delve into the particulars of Wall Street culture and that of the individual firms that comprise it, it behooves us to look at the broader environment within which this finance culture exists. The national culture of the United States has supported the rise and continued existence of Wall Street and its affiliates over centuries. The overriding cultural belief that promises money and fame to anyone willing and able to work for it, regardless of their social standing, feeds many finance students in their quest for jobs on Wall Street. If we are to gain a better understanding of the culture of Wall Street, it is necessary to first delve into the root of this particular, strongly held yet often unconscious cultural belief regarding money. In doing so, we will be able to delineate between which

behaviors surrounding money are considered acceptable and which behaviors lie beyond our normative cultural bounds. Yet the finance sector of the United States does not exist in a bubble—a visit to any firm will quickly reveal this. The wide mix of spoken languages evidences that firms no longer hire exclusively within one national cultural milieu, but instead freely move the most qualified employees around the globe to their offices on all continents to maintain their firm's competitive advantage. Because of this, we will also take into consideration the effects other cultures that have permeated investment finance have contributed to the overall financial sector, given the increasingly global nature of investment finance.

American Dreams at 30,000 Feet

Money plays an important role in the psyche of Americans, and has ever since the founding of the original 13 colonies as a nation separate from the British Empire. Tangible evidence of the importance of money in demonstrating a person's worth, regardless of social standing, became more obvious prior to the 2008 financial crisis. Americans were accumulating an increasing amount of stuff, collectively and individually in the years leading to the financial crisis. This was drawn to my attention in the most unlikely circumstances—during my regular red-eye commute between Boston and the West Coast via Las Vegas over several years in the early 2000s. Subtle but pervasive changes in various aspects of the commute led me to become increasingly aware of this accumulation.

One thing that never changed was the incessant cry of the *Wheel of Fortune* slot machines by the airline gateways in Las Vegas, where die-hard gamblers would sit until their planes departed. What did change were the people who were traveling: more people were taking a weekend in Las Vegas to gamble just because, rather than for some special reason. As the years went by, more women in economy class could be seen toting designer handbags, especially Coach. Other accessories bought to suggest wealth and luxury, such as designer-labeled sunglasses worn at midnight, were also part of the trend. A closer look at these women revealed an appearance and behavior not generally synonymous with "traditional" cultural indicators of affluence. Scruffy hair, sweatpants, oversized boots worn in the middle of a desert, accompanied by a Coach handbag with Gucci sunglasses. Being on the red-eye further suggested that these Coach bags were only displays, symbols meant to show that they, too,

had attained the American dream of wealth. Recent marketing research shows that these items are not true indicators of wealth but rather mass-marketed consumer accessories added to private equity acquired mass luxury brands, meant to raise total revenue. They are specifically marketed and priced to give the consumer for whom these name brands had previously been out of reach a sense of luxury. Tiffany & Company represents one company in the luxury category that specifically marketed a new line of lower priced silver jewelry to attract a market that previously could not have afforded to shop there. Accessing a different group of consumers, who no longer feel excluded from buying something in a little blue bag from Tiffany's, has boosted the bottom line of the company. At the same time, more expensive and unique items are marketed to truly wealthy individuals who require a customized experience from Tiffany's.

Men, too, were not exempt from showing their status on the red-eye but did so differently. With the housing boom in Las Vegas, entrepreneurial-minded individuals from different parts of the country bought houses and flipped them the same day, pocketing profits that were easily bigger than their annual salaries. On one flight, talking with a fireman from Massachusetts, I learned about his small but profitable real estate dealings in Las Vegas—flipping a few houses was affording him the ability to fly first-class, gamble regularly in Las Vegas, and otherwise live far beyond his fireman's salary. Entrepreneurs like this man are revered within American culture—they were when the nation was founded and still are today.

These snippets of Americana during the early 2000s, glimpsed 30,000 feet above the land itself, show that the cultural obsession with money and wealth was not confined solely to Wall Street. During this period, many individuals believed that they, too, could attain the American dream easily, and in short order. They deserved it. There was a frenetic quality to the pace at which individual wealth increased. Money seemed to be appearing out of thin air, ready for the taking, rather than acquired through the traditional process of laboring for it through "hard work." Americans were spending at a prodigious rate, buying more "luxury" goods, and building larger homes with every conceivable convenience. Gambling at casinos became a normal pastime, with airlines providing convenient, cheap flights straight to the neon lights, promising fast money. State governments and Native American nations alike jumped on the bandwagon to provide gambling opportunities to citizens clamoring for more opportunities to gain wealth easily. They would benefit from the increased spending, both through taxes and directly from the

profits. Sociologists concerned about the long-term social ramifications of gambling establishments were brushed aside. Stewardship and the understanding of responsibilities that traditionally come with increasing wealth were ignored. The shadow side of money was growing larger with each passing year.

The compulsive acquisition and free spending of money during this period had the frenzied feel of something being, or becoming, out of control in the culture as a whole—not necessarily pathological, but on the border of being so. People who become caught in the vortex, unable to stop the addictive cycle of spending, frequently try to hide their behavior from friends and family. When this happens, consumers cross the border into addiction or some other pathology. The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-V*) has one category that specifically addresses this addictive propensity to gamble—pathological gambling, for people who gamble compulsively and do not know how to stop. Las Vegas and the rise of gambling meccas on Native American lands cater to this disorder, as do Internet gambling sites. Uncontrolled spending that is not necessarily related to gambling may be part of the manic phase of a bipolar disorder. This manic phase sometimes takes the form of unrestrained shopping at malls and online. During his term, former president George W. Bush exhorted his fellow Americans to "spend" their way out of the recession. If the president encouraged it, then how could such manic spending be dangerous, and wouldn't curtailing it be so un-American? Yet such behavior often has devastating effects on families. Those afflicted quickly run up disproportionately large bills relative to their family's wealth. Credit cards are not an unlimited source of cash; the money borrowed must be paid back.

Buying expensive luxury Coach handbags at full retail price while earning an entry-level administrative assistant's salary can be analyzed on different levels. From a rational economic perspective, the buyer can be seen as financially irresponsible, buying above his or her means. Psychological explanations might suggest that the purchases are symptoms of some pathological compulsion, or perhaps there is some unconscious personal need, such as acceptance by peers, that the purchase of the handbags is meeting. This need to be accepted by society is one with which marketers are very familiar, creating desires and "needs" where none existed and selling their products as being able to fulfill that need. These specific, money-related psychopathologies may be further exacerbated by the overall cultural attitude toward money. Keeping such

considerations in mind, we are now in a better position to examine the American obsession with money.

Every individual has a personal and unique relationship to money, which has been formed over time and influenced by different experiences that involved money. In the parlance of Jungian or depth psychology, individuals will have "complexes" relating to money, in addition to other complexes, such as father or mother complexes. These money complexes have emotions associated with them that are triggered by experiences an individual has felt relating to the archetype of money. Collectively, humans have an idea of what money represents, which provides a shared, archetypal meaning to money. Although each person experiences the archetype of money slightly differently, the underlying quality of the money archetype is the same universally. Thus, money can best be understood as a medium of exchange containing some intrinsic meaning relating to power, and I have defined the archetypal "core" within a money complex as the resources available to the Self—those resources are represented in a physical form by money.

Between the personal (individual) and archetypal (universal) levels in the psyche lies the cultural level, as defined by the Jungian psychoanalyst Joseph Henderson.[2] Every culture has its own relationship to money. We can examine this relationship in greater detail by looking at the space between the archetypal and personal levels of the psyche. Psychologically, we must have a firm understanding of the cultural complex of money, as individuals may start to identify with the cultural complex rather than be aware of their personal relationship to money. Continuing with our example of the administrative assistant who buys multiple Coach handbags that are beyond her financial ability provides an opportunity to explore why she is doing so. Does purchasing each bag give her the feeling that she has "made it"? What does she acquire through purchasing that bag, with the company's label prominently displayed, rather than an equally well-made one at a lower cost? If owning the bag makes her feel that she has "made it" by acquiring a symbol of wealth beyond what would be considered reasonable from a financially responsible perspective, then this bag may grant her the illusion of wealth. It may be that the bag makes her feel more prestigious—that she is more than an administrative assistant earning less than the median income. Marketers have become proficient at tapping into the emotional context that purchasing products can give consumers. A Coach bag represents something to this young woman that enables her to disregard her current reality and delve into nonexistent resources (made possible through the

use of credit cards) to acquire the physical manifestation of her sought-after dream.

The Cultural Complex of Money in the United States of America

The United States of America has long been considered the promised land of milk and honey, a place where the poor can rise to become wealthy, well-respected members of society. It has become synonymous with financial opportunity and capitalism. The Statue of Liberty, standing at the harbor of New York City, reinforces these beliefs, representing the doorway to all who believe that they can make their fortunes in the United States. Stories abound of people who were penniless upon arrival and became millionaires, while those who were not so fortunate became part of the working class and through their labor enabled others to earn more.

The economic system of the United States is strongly based on the Protestant work ethic, a legacy of the first Puritan settlers who formed lasting European colonies on the subcontinent. One of their fundamental beliefs was that through hard work they would be blessed and become rich, thus revealing they would be destined for heaven. John D. Rockefeller is quoted as saying, "I believe the power to make money is a gift from God—to be developed and used to the best of our ability for the good of mankind."[3] In many ways, this is the ultimate American value that has gradually given birth to a culture dominated by money. Throughout American history, there are tales of people who became wealthy owing to great effort: the miners of the mid-nineteenth century who braved hardships to excavate gold; the railroad barons and bankers of the nineteenth century; the technologically savvy young men who were at the forefront of the computer industry in the twentieth century. All became multimillionaires and billionaires as a result of their foresight and industriousness, providing economic stepping-stones for American society at large.

Cultural anthropologist turned marketing researcher Clotaire Rapaille found that people in the United States view money as a mechanism to "show that [they] are good, that [they] have true value in the world."[4] Rockefeller believed it was his obligation to use his money as he saw fit to help the world. In a similar vein, more recent billionaires Warren Buffet of Berkshire Hathaway fame and Bill Gates, founder of Microsoft, founded the Giving Pledge. The purpose of the publicly stated moral commitment for those who join to give away the vast majority of their

wealth is to "inspire conversations, discussions and action . . . and to bring together those committed."[5] This was a new turn in American giving, motivated by the aftermath of 2008. In contrast, the young administrative assistant at the other end of the financial spectrum also uses what resources she has to show others her worth. Giving away the majority of her wealth to show status is infeasible; purchasing a bag associated with luxury, however, is seen as conferring greater societal status and, with it, greater value as a person. With no history of ruling kings, queens, or emperors, all people living in the United States (theoretically) have an equal opportunity to show they have great value in society by publicly demonstrating that they are making as much money as is personally possible. Displaying the fruits of their labor proves that they are accomplished—and good—which further means they have value. In particular, money earned through work is valued most within the American culture.

A Pew study conducted in 2006 found that 81 percent of young adults between the ages of 18 and 25 identified their generation's most important goal as "getting rich." This contrasts with the 62 percent of those between the ages of 26 and 40 who agreed with the same statement.[6] Thus, the emphasis on obtaining vast quantities of money has become more apparent in young people as they transition into the workforce. Growing up in an era of increasing connectivity with social media permeating every aspect of their lives, the current generation entering the workforce has the means to display their wealth to a wide audience. Peer pressure to share more information about themselves makes it easier to identify those who do not conform to the expected standard and hence, easier to shun them. Privacy, and the ability to hide a lack of wealth, has become difficult. Despite this desire to accumulate money in order to confirm at a cultural level that they have value, most people in the United States believe they do not have enough, no matter how much they do have.[7]

This point is made clear in a photographic essay by Peter Menzel, who sought to capture in pictures the statistically average family of 30 different nations around the world. Each family was photographed outside their home with all their material belongings. The family from the United States had a plethora of possessions, particularly when compared with other families worldwide. Not only does the average American family own a detached house, they have multiple cars, furniture, appliances, and so much more stuff that it spills out onto the street in front of their house. Yet there is a collective cultural demand for *more*. There

is a belief that, however much is possessed, it is not enough, and there will never be enough. In an effort to meet the needs of all the people who now believe they are entitled or deserve to have the products advertised as necessities, counterfeiting of goods in high demand takes place. Walking down the streets of New York City, hawkers on the sidewalks sell Tommy Hilfiger apparel, handbags from the major luxury designers, and sunglasses—all at unbelievably low prices. If these mobile salespeople see a policeman, they rapidly pack up and move their wares to a different location. There is a steady devaluing of the original goods as the demand for the counterfeits increases. Most susceptible to the pressures to have the "in" goods are children, and they in turn put pressure on their parents. The consequences for families can be dire as they become sucked into this vortex.

From firsthand clinical experience working with children and families in need, I have witnessed parents who can ill afford iPods and Nike shoes accommodate the wants of their children so they will not be social outcasts. This is particularly true for families who are already socially marginalized; parents want their children to fit in better, to become part of the fabric of the community. Children feel belittled for not having the same material goods as their peer group, so one of two things tends to happen if the families cannot afford the goods: either the children learn to steal the items for themselves, or the families cut back on genuine necessities, running up debt to provide their children with these seemingly necessary goods that provide status. This is true for both recent immigrant families as well as those with a long family history in the United States. Regardless of when an individual first settled in the United States, with very few exceptions, most families in this country held immigrant status at some time in their history.

Clotaire Rapaille suggested that because many immigrants came with nothing to the United States, they still possess the mind-set of having nothing, a reflection of the loss of leaving the land of their birth. In an attempt to compensate for this internal sense of loss, Rapaille continued, possessions are amassed, providing evidence of the accumulation of money. He called Americans "the poorest rich people in the world."[8] This attitude observed by Rapaille is not based on rational intellectual thought, but rather emanates from a far more primitive place in the collective cultural psyche that continues to pervade cultural behaviors toward money in particular.

The role of immigrants in the cultural complex of money in the United States cannot be underestimated. Immigrants have, and continue to have,

an impact on the psychological developmental state of the country as a whole, which in turn plays a role in defining the cultural complex surrounding money. Carl Jung commented in one essay, "[T]he European emigrant is rejuvenated on American soil; in that primitive atmosphere he can revert to the psychological pattern of his youth—hence his adolescent psychology with all the educational problems this entails."[9] Rapaille, among other psychoanalysts, echoed the same sentiment 40 years later when he noted that the United States remains in a constant state of adolescence due to the continuing influx of immigrants.

From the perspective of developmental psychology, a country that is predominantly adolescent in nature requires a strong positive father figure, capable of providing boundaries and enforcing them. For any given country, a government or another strong ruling entity provides the positive father figure. With weaknesses in American governmental leadership in recent decades, corporations have stepped in to fill the void and provide a masculine parental figure for the population at large.

A profound moment in the history of the United States occurred in 2001 when Islamic fundamentalists affiliated with Al-Qaida destroyed the World Trade Center. Blowing up the Twin Towers, which housed many of the most prestigious investment banking houses in the United States, was a direct assault on the capitalist underpinnings at the core of the financial system of the United States. Working with money high above the ground, it is as though one is supported by the air, and symbolically emphasizes the "air" or "spirit" quality currently associated with money. The image of two buildings reaching into the sky, destroyed by airborne planes, has become seared into the national consciousness. When analyzed from an archetypal perspective, this attack was symbolically in the realm of the Father, specifically targeting the cultural money complex of the nation. The obliteration of these two buildings in Manhattan and the concurrent killing of their occupants and the passengers on the planes was the largest non-domestic originated terrorist attack on US soil in modern history. Aside from the obvious fear of physical annihilation, survivors confronted a deeper underlying fear. If we understand the attack and subsequent collapse of the Twin Towers as symbolizing the inflation pervading attitudes of the professional financiers who were targeted and killed and who in turn represented the way to greater wealth for the general public, then from a symbolic perspective the destruction of the towers may have uncovered repressed feelings of unworthiness in the collective American consciousness that were previously hidden by a mask of desire and greed.

Such greed has often been identified as emanating from the realm of high finance; those involved with finance professionally have often been labeled throughout American history as ruthless individuals. Many of these people have taken great risks in their pursuit of wealth. As we have already seen, their goal was, and is, to make money—and often far more than they personally need. Although some people who accumulate wealth beyond their needs do so because they receive satisfaction from the process, those who want to make money have an intrinsic desire to possess money. Two key points arising from this claim need to be addressed. First, making decisions that can be considered ruthless implies a lack of concern for the well-being of the person at the other end of the deal. It requires a willingness to play hardball, to take the consequences if it does not work out, while simultaneously providing an opportunity to crush the opponent. This stance could be seen as a lack of empathy and would lend support to the assertion that financial psychopaths are more prevalent in financial circles than in the general population. Or it could be that the same ruthless countenance results from a situational lack of empathy necessary to complete a deal successfully. In the latter case, it does not necessarily indicate a pathological psychopathy.

Second, when examined on the unconscious level from a psychoanalytic perspective, one possible interpretation is that this "ruthless" finance person is being driven by an inner need to accumulate money. Following this line of reasoning, the next question is "From where does this compulsion originate?" It may be that a personal history of either financial or emotional deprivation is at the root of such a drive to amass more. If the former, then possession of a vast fortune may provide the financial security that was missing earlier in life, fulfilling the need. If the latter, then the compulsion to amass wealth is akin to an empty hole that will need continual filling unless the underlying cause is addressed, possibly through psychological therapy. However, if a person is inherently psychopathic, then this "hole" will never be filled, as psychopathic individuals experience "chronic feelings of emptiness and of personal isolation [and have] a need for constant stimulation."[10] For the purposes of trying to uncover financial psychopaths, it is necessary to keep in mind that the person who has an emotional hole but is not an innate psychopath may display as a high-anxiety or secondary psychopath (in keeping with Koenigs et al.'s nomenclature, which will be discussed further in chapter 6).[11]

Culture within the World of Investment Finance

With a deeper psychological and symbolic understanding of the pervasive culture surrounding money in the United States, it is now possible to dig deeper into specific microcultures of money that exist within the overall national culture. The most encompassing of these microcultures would be the universe of finance itself, honing in on investment finance, with its narrow focus on making money. In recent years, a perception that psychopaths are responsible for causing damage in the financial sector has been raised in the media. These psychopaths are not like the violent serial killer/investment banker portrayed in *American Psycho*, but rather individuals within the world of finance who are preying on others, using money as a weapon to inflict damage. Is this perception an illusion, or is it rooted in reality? Delving into the realities of the investment banking culture may provide us with an alternative or concomitant cause that may assist in explaining the current perception that financial psychopaths are on the rise. This culture within investment banking lies outside the individual, yet it also influences the individual. People living in the United States and working in investment finance receive cultural cues from numerous sources, owing to the intrinsic intertwining of money, lifestyle, and personal worth within the general US culture. There are, however, distinct elements of the investment finance culture that have been recorded by researchers who have had access to the work environment on Wall Street. Students are exposed to this firsthand when visiting firms on Wall Street. Yet the extent of how embedded these cultural elements are truly becomes apparent when understood over time.

Tom Wolfe shed fictional light on the world of Wall Street in the 1980s in *Bonfire of the Vanities*. At the end of the decade, the 1989 publication of Michael Lewis' popular memoir, *Liar's Poker,* opened the window into the nonfictional investment finance world. In his book, Lewis described in detail the male-dominated culture in which vast sums of money were being made. The language he used could easily be applied to the criminal psychopathic milieu in a different context: "Traders are masters of the quick killing,"[12] is one such phrase depicting the behavior of his colleagues on Wall Street. In response to why investment bankers make such exorbitant sums money, Lewis simply explained such compensation was because these young men with "so little experience . . . when attached to a telephone . . . [were able to] produce even more money . . . [which] was less a matter of skill and more a matter of intangibles—flair, persistence,

and luck."[13] These two excerpts alone demonstrate that the psychopathic traits of impulsivity, charm, and aggressiveness—useful for succeeding in such work—coincidentally also provide the minimum criteria needed to meet one of the core requirements to diagnose Antisocial Personality Disorder, the diagnostic umbrella under which psychopaths fall.

A more recent firsthand glimpse into the trading culture was provided by Turney Duff's account of his time on Wall Street from the late 1990s until the financial crisis in 2008.[14] Duff was surprised to find he could get a job on Wall Street, given his background: no Ivy League education, no background in business, coming from an average family in Maine that lacked social connections in the investment world's milieu, except for one uncle. He originally traveled to New York City hoping to get a job in journalism and, through a series of fortunate events, ended up working for Morgan Stanley after impressing one interviewer with his knowledge about a television program. In his memoir, Duff freely admitted he was not good at mathematics and did not understand the market. However, he was a good communicator, determined, and willing to put in the time to learn the rudimentary market skills. In reading how his career developed over time, Duff's strength became apparent—he was good at reading other people and how they reacted to information—and this was what propelled him to become a reasonably successful buy-side trader.

What is unusual about Duff's recounting of his time as a buy-side trader, first with the Galleon Group and later with Argus Partners and J. L. Berkowitz, is the candor of his narrative—detailing his involvement with drugs, alcohol, and prostitutes, much of it paid for by sell-side traders. At one point, he recounted his rationale for taking the first bag of cocaine at a party: "[I]t's part of the culture . . . It's not really a big deal. I should try it once."[15] By 2002, Duff was firmly entrenched in the culture as a trader. Describing his new life, he recounted "[W]e traders on Wall Street pride ourselves on being the ultimate alchemists. Drugs, alcohol, money, and sex are all ingredients in the elixir of power."[16] It is obvious from his writing that Duff enjoyed and was able to rationalize the attention lavished on him by sell-side traders, along with the power he had to give and take away if he did not receive what he wanted.

Duff's remarks are not outliers. When I inquired of other traders about their reactions to Duff's experience, one middle-aged buy-side trader commented that that sort of behavior was for "the younger guys." This trader had reached a point in his career where his liver was "recovering," in his words, and he was following Benjamin Franklin's advice to go "early to bed, and early to rise," so he could get enough sleep and still

keep an eye on the markets. In contrast, when I asked an older trader about how his experiences matched up with Duff's account, he leaned forward, a twinkle in his eyes, and asked if I was referring to the big black limos and prostitutes that he remembered from when he was younger. At one point he sighed, reminiscing with a wistful tone: "Ah, those were the days." All of the traders I spoke with in 2013 mentioned that such things were not the same any more—people were hunkered down, and the excesses of yesteryear were not to be found everywhere anymore.

In 2002, when reflecting on why some traders behave nastily toward others, Duff offered the following thought: "[M]aybe it's the pressure, or the amounts of money we deal with, but traders do some crazy shit, especially when it comes to people who want our business."[17] This side of the culture of Wall Street has not changed. One sell-side trader I spoke with said he had taken a client skydiving to get his business; another had gone diving with great white sharks in Australia because the buy-side trader was an avid scuba diver. Essentially, sell-side traders find the hook for their counterparts on the buy-side and dangle appropriate bait to lure in the trader with their business. Some would call this being business savvy, others may see it as manipulative behavior.

It is at this point in his career where Duff started to identify with what he now considered the "acceptable behavior" of traders who have power. In the words of anthropologist Ruth Benedict: "[Wall Street's] habits are his habits, its beliefs his beliefs."[18] He had been inculcated by the trading culture within just a few years of being there. Previously, Duff had been able to identify when people were acting in sociopathic ways and recognize it as unhealthy. Yet only a few years into his Wall Street career, he was forcing people to behave in deference to him to underscore his power position relative to them. One aspect of money often overlooked in the discussion relating to psychopathic-like behavior of Wall Street professionals is the power inherent in dealing with large sums of money, in the hundreds of millions and billions of dollars. Power complexes are present in many other relationships—teacher/student, parent/child, police officer/detainee, therapist/client; essentially, whenever one party has the power to give or withhold from the other, there is the potential for abuse of power. The presence of money in a relationship adds an element that can further pervert behaviors, which some people are unable to resist acting upon.

Only one year later, Duff rationalized the further lowering of his moral compass. He had set his imaginary compass threshold as "never doing anything that would make people hate me." Duff knew that greed and power were obvious motivators for lowering personal standards,

followed by what he deemed "subtler reasons," such as needing money for a mistress, a larger mortgage, or funding expensive schools for children. Yet, when his power and authority were challenged by not receiving an allocation on an impending stock offering, his anger obliterated any moral reasoning he might have possessed. His subsequent actions led him to do precisely what he said he would never do. By this point, his transformation into a person who identified with the trading culture was complete—the complex surrounding money and power took control, and Duff could not stop himself, even if he'd tried.

As with many people who become inflated, Duff wanted to let other traders know what he was doing. He knew he could not provide inside information and brag, so instead he found ways to signal over the ticker tape that he was making a trade. Duff related how he traded in lots of 69,000 shares, so that when his trades showed up on the tape, other traders would know exactly who had made the trade. He could then use this information mechanism to misdirect people as to his true intentions, driving prices up or down, and then taking opposite positions to lock in profits. In essence, he became proficient at manipulating people so that he could profit financially. From Duff's account, the reader may conclude that he was behaving like a financial psychopath; yet his psychopathic behaviors only emerged once he had been in the trading culture for a number of years. This raises a question central to our understanding of the modern, twenty-first-century trader: are financial psychopaths born or made? We will address the complexities and nuances of this question later when we examine the clinical side of psychopaths in detail in chapter 6.

Karen Ho provided an anthropologist's perspective on how this Wall Street culture differed from that of the US money culture. While employed at an investment bank on Wall Street, she engaged in fieldwork, some of which focused on the time dimension of the culture. Ho noted, "[B]ankers work almost solely in the moment,"[19] which again underscores the impulsivity of the investment finance culture. This is compounded by the use of inside information to "fuel exuberance and continue the climb before the anticipated decline."[20] Finance professionals in this milieu, as both Lewis and Duff mentioned, are fixated on making deals, even if (and especially if) they are aware that there is a large downside looming ahead. From a psychologist's perspective, this could be considered manipulative, deceitful behavior, in which the trader is thinking only of himself or herself, without regard for the impact on others—all traits of psychopathic behavior.

Researchers at the University of St. Gallen, Switzerland, reported results of a 2011 study in Spiegel Online, in which professional financial

traders' egotism and willingness to cooperate was examined. They found that it was most important for the traders to "get more than their opponents . . . and they spent a lot of energy trying to damage their opponents." This aligns with the psychopathic desire to look out only for oneself. The more damning finding was that the traders' "reckless and manipulative behavior" was even more pronounced than for a group of known psychopaths administered the same test.

Karen Ho's work may provide an explanation for the type of conduct observed by the St. Gallen researchers. She suggested that the overall cultural impetus for this type of conduct is related to job security and compensation structure. Her description of investment banking professionals having work lives that "follow a pattern of nervous and unsustainable overdrive"[21] is reminiscent of Koenigs et al.'s high-anxiety psychopaths—those individuals who are not neurologically wired as primary or "true" psychopaths. Rather these are the individuals who display psychopathic traits as a result of learned behaviors from their environment. This anxiety comes from rampant job insecurity ("you're only as good as your last deal"), which is only partially offset by high compensation rates. Ho noted that "[b]ankers are motivated to squeeze as much out of the short term as possible, to do as many deals in the shortest amount of time" in case they are "liquidated."[22]

Wall Street culture keeps people continually on edge thanks to a constant feedback loop: by making a deal and earning a large compensation, the finance professional feels valuable; however, the financial work environment does not feel safe, because jobs can disappear without notice, which in turn feeds the fear that the financial professional is not valuable. Another deal is made at any cost to prove the professional's value, and so the cycle continues. This takes us back to the emotional hole that was discussed earlier. If the hole is a result of earlier impoverishment, either psychological or financial, then there is the possibility of filling it through therapy and the cycle can be broken. However, if it is due to true psychopathy, then the hole will never be filled, and the feedback loop will continue.

Over the past twenty years or so, there has been a slow but continual shift in the culture on Wall Street. Much of this can be attributed to changes in technology, which have impacted the finance culture at a much deeper level than most insiders are either aware or willing to admit. Some may say the driver for change was greed—entrenched individuals who thought they could use the new technology and those who knew how to take advantage of it for their own gain. Henry Lucas

examined companies that have been impacted by changes in technology and ranked the New York Stock Exchange on all scales as failing to adapt, with a very low probability of surviving. Despite the Exchange's long history, Lucas attributed denial by the senior management and their belief that they could effectively manage the rapidly changing technology from infringing on the status quo as being the fundamental cause of the NYSE's decline.[23] Others may say it was inevitable. Either way, we will take a closer look at the evolution of the markets in greater detail in the following chapter to situate such shifts in their historical context. Whatever the stimulus was, the new forces of technology have shifted the cultural landscape.

With the breakdown of the exchanges and the systems that were in place for trading stocks and making deals, another universe of trading professionals has emerged. They cannot be called investment professionals, as their sole purpose for being in the market is to game the system with the use of technology. These traders are coming from a more egalitarian culture—one in which the person with the finest computer modeling and mathematical skills is the most valued. These new professionals do not care about the old boys' club culture. Like Josh Levine, who developed an electronic communications network (ECN) called Island, many may not be as socially aware; this is not necessary for what they are paid to do. The actual money involved is only a side benefit of doing what they love—playing with models. There are some, such as Lee Farkas, the former chairman of Taylor, Bean, and Whitaker, who take advantage of those with superior technological and mathematical skills, knowing that seemingly unlimited amounts of money can be made by manipulating markets with the use of technology. We will delve into the background of Farkas in much greater detail in chapter 8.

Given the focus on technology and quantitative skills since the 1980s, it is appropriate to ask where the older investment professionals have gone, those who came through the world of finance when the ability to build relationships was the key to survival. Some of the older crowd threw in the towel—one such individual I spoke with said frankly, "It's just not the same anymore." He no longer enjoyed coming into work; he felt superfluous. Others have gone into private equity, where deals can still be made between people. Rather like the Slow Food movement, a Slow Money movement has evolved. People stepping out of the stock market are looking for the next hot company in which to invest. Just as with the stock market, it is possible to have ownership within private equity; the downside is the illiquidity of the shares until the company

either becomes public and lists on an exchange or gets bought out by another company. In many aspects, it is the way investing used to be.

Living the (High) Life

The widespread use of drugs among finance professionals also contributes to the puzzle of understanding Wall Street culture. Although there is little academic literature regarding drug use on Wall Street, anecdotal evidence, such as that provided by Duff and discussed earlier, suggests that its use is prevalent and has been for decades.[24] This issue is being raised at this point in the discussion of Wall Street culture as behavioral patterns resulting from the use of cocaine can also be interpreted as hallmarks of psychopathy. These include compulsion and impulsiveness, which often lead to poor decision making. If a person is indeed diagnosable as psychopathic, then the presence of alcohol and drug addiction is highly likely.[25]

Martha Stout, a psychiatrist well-known for her work with sociopaths, commented that "[p]eople who are sociopaths report that they crave extra stimulation almost continually . . . [t]he inclination to dilute boredom chemically for a while is part of the reason sociopaths tend to be alcohol and drug abusers."[26] One study conducted by Rita Goldstein and N. D. Volkow using functional MRIs showed cocaine use lighting up the same pleasure centers in the brain as money.[27] In a follow-up study, they demonstrated that the corticolimbic system becomes activated for cocaine addicts for all levels of monetary reward.[28] Non-cocaine addicts do not show the same level of corticolimbic activity until higher levels of monetary rewards are reached. The downside to intensive cocaine abuse is "more marked deficits in . . . executive control, visuo-spatial abilities, psychomotor speed and manual dexterity,"[29] even after periods of abstinence. The implication of this finding is that those traders on Wall Street who abuse cocaine are setting themselves up for diminished cognitive abilities in the future, impairing their ability to make sound deals.

Jonathan Alpert, a psychotherapist who works with Wall Street professionals, made the following observation in the award-winning 2011 documentary film *Inside Job,* about the 2008 financial crisis: "[It was] typical [for Wall Street professionals] to go to strip bars, to use drugs. I see a lot of cocaine use, a lot of prostitution." Alpert stated that many of the professionals justified these behaviors as they "[felt] the need to

participate in that behavior to make it, to get promoted, to get recognized," much as Duffy had. Given that the culture of an organization is conveyed from the top down, and according to Alpert, his clients claimed that top management knew of these behaviors, it follows that drugs, alcohol, and sexually oriented entertainment, if not condoned by the major investment banking houses, are at the very least not actively discouraged. This attitude toward drugs reinforces impulsive behavior and complements the general cultural environment in Wall Street, characterized by job uncertainty, and the focus of living day-to-day making deals, grabbing as much compensation as possible before the real possibility of losing one's current job and having to move on to another.

In recent publications, multiple writers in the financial press with insider access have opined that the culture described by Lewis and Duff is unacceptable. John Gapper of the *Financial Times* wrote a piece responding to the most recent Libor scandal, stating that "amoral behaviour is deeply embedded" in investment banks and that the "culture of the trading floor is remarkably immune to shame."[30] Gapper's comments focus squarely on the lack of remorse that is perceived by observers of Wall Street. Such lack of remorse is a distinct and necessary trait in order to diagnose psychopathy. Thus, even within the financial world, insiders are beginning to speak out about the different cultural standards for those employed within the investment finance industry compared to those outside. It has taken multiple, large-scale scandals affecting people in all walks of life worldwide for this to happen.

White-Collar Crime

At this point, we turn to the shadier side of Wall Street, namely white-collar crime. Increased attention by sociologists and other academics has led to a proliferation of books and television shows in the wake of the 2008 financial crisis. However, in 2006, prior to the crisis, sociologists Neal Shover and Andy Hochstetler were already of the opinion that the time was past due for white-collar criminals to bear a more equitable burden for the impact their actions had on society. Shover and Hochstetler also noted that "when the state looks the other way or responds with apparent indifference to white-collar crime, those tempted to violate the law are emboldened."[31] A wave of young men making headlines as rogue traders was starting to gain momentum around that time, with Nick Leeson's infamous escapades at Barings Bank seeming to reach a new standard for uncontrolled risk taking. Barings declared bankruptcy

in the wake of Leeson's actions, yet other banks survived huge losses in the billions of dollars with only the supposedly "lone" rogue trader receiving public discipline. Managers and top-level executives alike spoke publicly about the need for greater internal control. Some banks, such as Société Générale (which will be discussed in greater detail in chapter 7), changed their internal controls as a result of one rogue trader's dealings. Yet in retrospect we can see that these rogue traders, when successful, made their firms a great deal of money, and, as a result, management frequently looked the other way. A variety of risks were taken by different individuals within any given organization to make money, but the consequences of their actions were treated differently depending on where they were within the organization.

Shover and Hochstetler also observed back in 2006 that "the backgrounds of white-collar criminals are tilted conspicuously toward the middle and upper classes," enabling them easier access to "exploit positions of organizational power."[32] This was especially true for individuals coming from very wealthy backgrounds with high social standing and privileges. Looking at the data from the US Sentencing Commission, Shover and Hochstetler found that for white-collar criminals convicted of fraud, the average amount lost was $30,000 and that larger companies were much less likely to be investigated. These observations link with the culture at investment banking houses, as upper management was rarely, if ever, indicted. Rather, the lone trader, who often came from a less privileged background and was hungry to make money, became the scapegoat for deeper institutional issues that were not addressed directly. Such information is not of the type imparted to finance students being guided down Wall Street.

Further sociological research has found that the way middle-class children are currently raised also contributes to their propensity to become embroiled in white-collar crime. Studies have shown that parents have taught their children that lack of intent can excuse a host of uncouth behaviors, which are then carried over into their adult lives and the work world. One high-profile example that became known through social media channels in real time as teenagers vandalized the home of Brian Holloway, a former Patriots football player, demonstrates the attitude of both children and parents alike. According to reports in the news, over three hundred teenagers joined in the party, which involved alcohol and destroying the house while Holloway was out of town. All the activities could be followed in real time through Twitter and Facebook postings made by the participants. Holloway enraged parents by

posting the names of the teens after offering forgiveness if the teens came to help clean up—only two came.[33] Some parents were considering filing a lawsuit against Holloway, citing the house was empty and already had some damage pending foreclosure proceedings. As of October 2013, five individuals had been charged with a variety of felonies and related crimes.[34]

Another factor Shover and Hochstetler cite includes the highly competitive environment within which middle- and upper-class children are now raised. The competitively charged work environment in the financial world mimics what many experienced in childhood, activating strategies that were developed for coping with stress and competition as youths. Children born in the late 1980s and going forward have been subjected to intense competition in schools—in terms of passing state-mandated tests, being on winning sports teams, and getting into the "right" university—with increasing global competition making attainment more difficult. With the added emphasis on excelling in mathematics and science, American universities often pass over American students for graduate admission to Master of Science in Finance (MSF) programs in favor of internationally schooled peers who are better qualified in terms of math skills. This trend only further increases the competitive element attached to jobs in finance. The sense of entitlement often found in middle- and upper-class children also pervades the ethos of the potential white-collar criminal. Defended by their parents as children, these adult professionals have learned to argue their position with the full belief that they are in the right. This feeling of entitlement has also contributed to arrogant attitudes, which many children learn to adopt to survive in the competitive atmospheres in which they are raised.

Finance: A Global Culture Fusion?

An added element to societal and firm cultures is the infusion of external cultural variables. Geert Hofstede's work, examining cultural values using IBM employees over multiple decades, has provided a wealth of information used by corporations worldwide. Hofstede showed through various perspectives the cultural distance countries are from each other along different perspective continuums.[35] For example, the United States and Great Britain have a relatively close cultural distance, whereas the United States and France are not close on most measures of cultural similarities. People from other cultures have been added to the melting

pot comprising the United States ever since its inception, whether immigrants or indigenous persons. With the advent of electronic trading and multinational financial firms that seek to find the best employees, people interact and move globally, bringing with them their own cultural backgrounds and cultural projections, as well as being acculturated into the firm for which they work.

A study by Diana Winchie and David Carment focused on immigration to Canada by well-educated, skilled immigrants from India discovered that the stated primary motivator was a perceived increase in job opportunities (more than 73 percent), followed by a desire for greater income (50 percent of respondents).[36] Thus, for one subset of educated migrants who populate the investment banking community in North America, the ability to further their careers is paramount. By extension, their incomes will also increase, although that is not given explicitly as the primary reason for migration. It can be assumed that these individuals believe or know that their skills and talents are applicable to work opportunities outside their country of origin and will receive higher remuneration.

Other studies have suggested that people who migrate often do not fit the typical cultural profile of their home country. Thus, by moving to North America, traits already possessed by immigrants can be allowed to flourish in a more compatible cultural environment. The effect of this is to skew the distribution of certain psychological and/or behavioral traits within industries that find those traits desirable.

Both Martha Stout[37] and Robert J. Smith[38] observed that in cultures in which individualism is valued over a more community-oriented environment, psychopaths excel. Using Hofstede's work for reference, the United States is the prime example of a national culture that values individualism. It ranks at the top of the list of 50 countries, with a score of 91, followed closely by Australia (90) and Great Britain (89). By contrast, India scores 48 on the same index, indicating that the country is more collectivist.[39] Putting together Hofstede's findings with the observations of Stout and Smith, the inference can be drawn that New York, Sydney, and London would be ideal locations for psychopaths to flourish, since the highly individualist cultures in those cities would favor psychopath-enabling tendencies. Further supporting this contention is a study by David J. Cooke and Christine Michie in which they showed that psychopaths tend to migrate to larger cities.[40] All three of the aforementioned cities are major finance hubs, suggesting they might be good starting places to look for financial psychopaths.

Building on the individualism perspective, psychoanalytic literature[41] has begun to explore the concept of a "Wild West" complex in the context of the American psyche, which would be one expression of this particular form of individualism. The Wild West complex, unsurprisingly, evokes the image of the eternal, limitless frontier, where it is possible to keep pushing forward to obtain more resources for one's self. By imagining John Wayne or Robert Redford in their roles as cowboys in Western movies, it is possible to capture the essence of this complex: the solitary, heroic cowboy, using his innate skills or resorting to tricks to succeed against the wild and unknown frontier and discover unclaimed gold. It is hardly surprising that the themes associated with the Wild West have endured in the American psyche, given its ties to the core of American culture.

Following Robert Hare's assertion that the United States is fostering the growth of psychopathy, Stout wrote, "[I]n America, the guiltless manipulation of other people 'blends' with social expectations to a much greater degree than it would in China or other group-centered societies."[42] Countries such as those in Scandinavia and Asia favor a more collective focus on culture. Correspondingly, the rates of psychopathy in those countries have been found to be significantly lower than for the United States.[43] Recent studies have focused on using Hare's Psychopathic Checklist (PCL) in countries worldwide to assess for psychopathy. Overall, reports have shown that it holds up relatively well, with some differentiating cultural nuances.[44] One such study compared the results of Hare's PCL-revised version given to Canadian and US individuals diagnosed as psychopathic with similar individuals from Belgium, Denmark, Norway, Sweden, Germany, and Spain. They found that the traits related to lack of remorse or guilt, shallow affect, and lack of empathy (deficient affective experience) showed validity in all countries. However, those traits that align with the interpersonal domain (superficiality, grandiosity, and deceitfulness) and behavioral style (parasitic lifestyle, lack of long-term goals, impulsivity, and irresponsibility) appear to have significant cultural components associated with them.[45] A different study compared convicted German and North American offenders and found that the antisocial factor may be influenced more by cultural factors.[46]

These findings support the cultural facilitation model, which posits that how interpersonal behaviors are expressed is a function of social processes within a given culture or society. The results of Cooke and his coauthors also suggest that fewer Europeans will meet the PCL criteria

for psychopathy than comparable North Americans, due to the cultural interpretations for the two culturally dominant factors.

As an indicator of the cultural mix present in the investment banking world, one can look at news articles from the last eight years to see who is being prosecuted for fraudulent trading practices. A wide variety of countries are represented: Asian Indian, British, French, and Ghanaian to name a few. Corruption (as defined by the United States) and other behaviors are more normalized within some of these cultures. Being able to use the trading platforms of North American and Anglo-European firms provides an easy route to apply the immigrants own cultural allowances to a culture where it is not expected. This was especially obvious in the case of Nigerian letter scam specialists originating from the Igbo in Nigeria, many of whom now live in the United Kingdom. They used their marginal position in society to take advantage of cultural stereotypes in order to make a living on the financial fringe.[47]

Effects of Cultural Variables

As far back as 1993, Robert D. Hare, whose work focuses specifically on psychopathy, believed that "our society is moving in the direction of permitting, reinforcing, and in some instances actually valuing some of the traits listed in the Psychopathy Checklist—traits such as impulsivity, irresponsibility, lack of remorse."[48] Almost two decades later, an empirical longitudinal study lent support to Hare's belief. One of the findings is that empathic concern for others has decreased in American college students, particularly since 2000.[49] Furthermore, narcissism, which is negatively correlated with empathy, has also increased,[50] which would give rise to behaviors that are similar to those observable in some psychopathic traits. Given the focus on making money that is present in the general culture of the United States and amplified within the investment finance culture, it may be that behaviors that aid in achieving the ideal of vast wealth are accepted as nonaberrant, although under other circumstances they would clearly be deemed as pathological and detrimental to society as a whole.

David Livingstone Smith, a philosopher and psychoanalyst, observed that the Freudian psychoanalyst Erik Erikson "was fascinated by the fact that although all human beings are all members of the same species, we tend to treat the members of different cultures as different kinds of beings."[51] This division of humans into different cultural milieus (known as pseudospeciation) can be made along varying lines, for example by

ethnicity, university attended, or the firm by which someone is employed. Doing so sets up an "us" versus "them" mentality, which in turn creates an environment in which it becomes possible to morally defend behaviors that might otherwise be deemed unacceptable. As an example, after the Enron scandal in 2002, the accounting firm Arthur Andersen was dissolved and absorbed by the other remaining large accounting firms. One accountant, who had been with Arthur Andersen less than a month prior to its demise, recounted how he is still referred to as "one of the Andersen people," despite being at the new firm for over 10 years. Michael Lewis' best-selling book, *Liar's Poker*, showed cultural divisions even within investment firms in the 1980s, emphasizing how pseudospeciation takes place within the financial investment community.

Smith further made the argument that "people are able to engage in spectacularly cruel actions because they've selectively decommissioned their moral inhibitions."[52] He defined *harm* as "morally unacceptable damage" and further noted, "[P]eople can be harmed and inanimate objects can only be damaged." Continuing to follow through Smith's logic, he arrived at the conclusion that "the closer we judge a creature is to us . . . the more inclined we are to give it moral standing."[53] Thus, when looking at the actions of finance professionals who have harmed others, it may very well be the case that they have first divided the world into "us—investment professionals" and "them—money of others that we use to make more money." Having done so, they now turn to their screens (an inanimate object) to take positions or make trades; the connection to other people and their money has been obliviated. In this sense, poor trading decisions can then be likened to causing damage, rather than harming anyone. And given the lack of connection to the individuals whose money has been lost, it can be argued that the financial professionals' moral inhibitions have been "selectively decommissioned," completing the faulty logical thought that the financiers bear no responsibility for the losses.

Thus, the role of culture plays an enormous role in how people interact and respond to money cues. From the overall national cultural attitude toward money, further encompassing the cultural milieu of a given work environment, individuals absorb and carry with them messages about how to behave in the presence of money—all of this without even considering a person's own relationship with money that has been formed within their family of origin. The culture surrounding money tends to be deeply unconscious, particularly given that talking about money tends to be a taboo subject in most Anglo-American societies. As we have seen

in this chapter, other circumstances, such as addiction, relate to money within specific cultural contexts and can also influence the types of behaviors seen around money. So it is important to consider the cultural context when evaluating whether a person might be considered a financial psychopath. In the following chapter, we will look at evolutionary factors that may play a further role in distorting behaviors that appear psychopathic.

4

(R)evolutionary Happenings

Three primary areas within the universe of finance have been the most affected by evolutionary changes: money, markets, and the financial theories underlying asset pricing. When approached as a related unit, it becomes possible to see how the evolutionary transformations in these three variables have influenced and altered what have become the most desirable traits that traders should possess. In this chapter, we will delve more deeply into how modifications in the nature of money, markets, and theories have affected both the conscious and unconscious behaviors of people in their current approaches to finance. It is not just financial professionals who have been affected. The general public has also had to adjust their relationships to money.

In terms of evolutionary changes, the first and most fundamental regards money itself. The evolving symbolic role money has played within US culture, and the impact this has had on the financial universe when combined with other demographic trends, was discussed in the previous chapter. We saw that money, and what it represents, has held a major role that cannot be underestimated in American culture. The face of money has changed dramatically since it first came into existence. What is accepted as money has differed across cultures and over time. Therefore, understanding how money has evolved around the globe will provide clues to the universal importance of money, as well as within distinct cultures, such as Wall Street. The collective beliefs about money affect individuals and are further shaped by an individual's culture, as well as his or her own personal experiences relating to money, all of which are brought to everyday situations. Tracing the transformation of money over time provides insight into the type of power that has been endowed in money. Understanding the changing face of money also shows how power can be controlled through regulations governing money and the corresponding influence on global financial markets. We live in a digital

era, and yet something as seemingly far removed as Babylonian coinage still affects our approach to modern financial markets.

Financial markets have evolved over time and are another factor contributing to participants' behavior in the financial world. As Alphonse Karr astutely observed more than 150 years ago, although things may change on the surface, their fundamental character stays the same. We will find this also holds true for financial markets. Glimpses into the history of modern financial markets reveal little has changed. The western coffeehouses of Venice, Amsterdam, and London centuries ago that provided a gathering place for those conducting financial business may seem irrelevant today, but the fundamental premise of their function has little changed. Likewise, the introduction of technology into the markets may have altered the speed of transactions and changed the number of workers, but the markets themselves still serve the same primary functions as they did hundreds of years ago.

Academics in finance have posited a number of financial theories that have impacted how money and financial markets are approached. These theories have been slowly evolving over time, as participants adapt to the changes in the market. The Capital Asset Pricing Model (CAPM) and its subsequent modifications have made a lasting impression on the markets. Newer theories that are employing biological evolutionary modeling are slowly being integrated into the mainstream.

By addressing these three evolutionary factors jointly, we will better see how one informs the other. Together, they shape how humans have changed, adapted, and continue to evolve in the context of financial dealings. By enriching our picture of human behavior in the markets and what motivates it, we are able to refine our search for financial psychopaths.

Aspiring financiers are learning to adapt their behaviors to fit both the spoken and unspoken needs of the current markets and to display those traits deemed most valuable by the major investment houses and corporations in order to be accepted into the culture of which they so desire to be a part. Whoever displays these sought-after behaviors will navigate successfully in the market and will be pursued by companies wanting to take advantage of those talents.

The Evolution of Money

At the core of this book is an underlying fundamental question: What is money? Etymologically, the word *money* derives from both old French (*moneie*) and Latin (*moneta*). Following the Latin root, *moneta*, meaning

mint or coinage, connects money to the Roman goddess Juno Moneta, in whose temples coins were minted. According to *The Barnhart Dictionary of Etymology,* the word for money did not come into the English language until the mid-thirteenth century, when it was first defined as "coinage, metal currency." As such, it was a physical resource that could be traded and being small in size made it easier to exchange than a camel or bolts of fabric. When examining historical sources, we find that for over 1,400 years, money in the Roman/Anglo world simply consisted of metal coins. Since then, the definition of *money* has expanded to be more encompassing, as evidenced by a recent entry in the *American Heritage Dictionary*:

> money/n/ 1) A medium that can be exchanged for goods and services and is used as a measure of their values on the market, including among its forms a commodity such as gold, an officially issued coin or note, or a deposit in a checking account or other readily liquefiable account.[1]

Over the ensuing six hundred years, several key transformations have taken place in the definition of *money*—the most obvious being that metal coins are no longer the primary form of money. Gold, a precious metal, has become a commodity. Officially issued paper money is now an acceptable substitute, as are accounts held in various forms at banks or other financial institutions that can be liquidated easily. As we track the evolutionary path of money, the reasoning behind these changes will become more evident.

Coins

Numismatic specialists at the British Museum in London have identified the use of metal as a mode of money in Babylonian trade as early as 2000 BCE. It is believed that government authorities first minted coins in a standardized and consistent manner 1,500 years later, from 561 to 547 BCE, during the reign of the legendary King Croesus. As ruler of the Lydian empire, Croesus was known to be an amazingly wealthy man by all accounts. Since the time of the Ancient Greeks, many stories and myths have been written about his wealth and lifestyle, giving birth to sayings, such as, "rich as Croesus." Croesus is credited with changing the composition of coins from electrum, an alloy composed of gold and silver, to coins made purely either of gold or of silver alone. Coins from this period can be seen at the British Museum. Seeing the coins, one is struck by the bright gold hue and artistry, reminiscent of the colorful images imprinted

on paper currency today. Lions' heads and other images related to nature are evident on these coins, the designs of which set the template for modern coins seen throughout the world today.

Further major developments in coinage occurred during both the Greek and Roman empires. In particular, the six hundred-year period following the reign of Croesus saw a movement away from the image of animals stamped on money, replacing these images with depictions of goddesses and the tools used to make the coins. It was also during this period that the previously irregular shape of money was modified to a more refined, rounder form. Such shifts are evidence of both improvements in the available technology and of an increasing tendency toward standardization.

Using money to carry messages and projections became even more commonplace with the passage of time. A hoard of Roman money buried in the fifth century ACE in Suffolk, England, contained coinage made of gold, silver, and bronze dating back to 40 ACE. These coins were purchased by the Birmingham Museum and Art Gallery in Birmingham, England, and are on display there. Unlike their predecessors, the visages of the emperors under whose reign those coins were manufactured are evident on these coins. Thus, in less than a century, the depiction of animals, tools, or goddesses had disappeared in favor of current rulers. This symbolic shift represents a movement toward identifying money with a given person or country, rather than with those items associated with the realm of the archetypal "goddess"—a symbolic shift away from feminine energy toward masculine energy.

Parallel developments in metal coins took place in China starting in the sixth century BCE. However, rather than using gold and silver, bronze and copper were the primary metals used in minting these coins. Historian Richard von Glahn observed in his 2005 essay, "The Origins of Paper Money in China," that bronze coins were "regarded as a primitive form of money and its low unit value testified to lack of commercial development within the economy."[2] With its intrinsically low market value, aside from any value the coins might hold symbolically, the central Chinese government then assigned any value it chose to the coins. By not directly relating the worth of the coin to the value of the metal that made up the coin, the Chinese government differed from other nations. According to von Glahn, European economists saw this state-controlled value as "attesting to the overriding dominance of the state in the Chinese economy," an interesting observation relevant to the modern value of virtual, non-gold standard markets.[3]

Europeans are credited with bringing coins to Africa, Australasia and Oceania, and the Americas. On the African continent, cowrie shells and cattle were previously both used as forms of currency, with the cattle arguably of more immediate use value than the later coins. The use of cowrie shells as currency has also been extensively documented in many island nations, likely due to its analogous form to metallic coinage in terms of Marx's labor transformation; both materials, when constructed as currency, physically manifest the high labor costs associated with finding and transforming raw materials. Coins, on the other hand, were essentially unknown within most of Africa until Islamic and European traders arrived during the tenth century. Although gold was exported from Africa to Europe during the medieval period, gold was not used within Africa for monetary purposes until much later. In Australasia and Oceania, natural elements including stones, feathers, and shells were used as currency until the arrival of the European traders with their coins. On the North American continent, the most recorded original form of money was wampum, which consisted of seashells strung on a belt. Wampum functioned as a form of ritual money for the Native Americans, especially within New England and along the Eastern seaboard, and was accepted by colonists as legal tender until 1670. Other common forms of money included beaver and deerskins, as well as tobacco. In 1652, silver coins made their debut in Boston, minted by the newly settled Europeans.

Paper Money

Paper money originated in China during the eleventh century ACE, yet did not become prevalent throughout the rest of the world until the turn of the nineteenth century. As was the case with metal coins, the Chinese state also assigned value to paper money, not necessarily correlated to its material worth. Money in China, according to von Glahn, was "an artifact of the supreme ruling authority . . . enabl[ing] the state to increase the quantity of money in proportion to the needs of its subjects,"[4] and thus remained fully under the control of the ruling emperor.

Although paper money in the form of notes existed in colonial America, the first paper money accepted under the Constitution of the United States was issued to finance the Civil War in 1861. The image on the front of the bill was that of the secretary of the treasury, Salmon P. Chase. Green ink was used for the back, hence the name "greenbacks."

Counterfeiting is one of the major problems associated with paper money. As a result, central bank printers have tried a variety of ways to make paper money harder to copy. Strips of metal have been inserted into the paper, along with a variety of hidden images and colored inks, leading to the works of art seen on euros, dollars, and yen. In Australia, paper money has been replaced by money constructed from plastic in an effort to make it more difficult to counterfeit, as well as to increase its longevity in circulation. Holographic images and metal strips embedded in the plastic add further complexity to these notes. Yet, as fast as central banks and their printers find new ways to attest to the authenticity of their currencies, black marketeers find ways to duplicate the processes. It is a big business for illicit dealers, and one that is difficult to contain as both sides have access to advances in technology.

There is an even darker side to paper money that is kept in the shadows by most governments—its value can be manipulated, unbeknownst to the holder. We learned previously that the early Chinese governments selected the value of their metal and paper currency based on the emperor's edict of its value. Most Western democracies did not operate under this philosophy, instead relying on the inherent worth of the metal that composed the coinage to set the value. Until the advent of paper money, all currency held by a given country was in the form of substances that were derived from a finite resource in the ground. Only nature could replenish these supplies, a process that (for most substances) stretches longer than the span of a man's lifetime. By using what we now consider a measurable commodity, such as gold, it was more difficult for black marketeers or forgers to create believable, counterfeit money. In eras when metal coinage was the standard, images in films portray people biting down on a coin to assess its authenticity. European imperialism during the early modern period led to a standardized implementation of this belief; by the 1800s, most countries accepted gold coins for payment of goods. Thus, gold had, in one sense, become a universal currency, with metal coins—and particularly those made of gold—showing the wealth of a nation or individual. Wealth could be easily measured by looking at the physical holdings of these coins. Similarly, coins could be counted and stored, then used when necessary to meet an individual's or a nation's payment obligations incurred from trading. If more money was needed than was in the national coffers, it would have to be mined. This was time-consuming

and expensive, requiring knowledge of where and how to mine the ore. Countries were thus constrained to spend no more than was held in the national money supply.

As global trade spread to become more commonplace, a problem arose: there physically was not enough gold to support the increase in the level of trading. Paper money was believed to be an effective way to circumvent this problem. Whereas before gold stores held by nations were used for settling trading or war debts, paper money backed by gold became the standard during the early nineteenth century ACE. The United Kingdom was the first country to adopt this new gold standard and other countries soon followed their lead. The chief exception was the United States, which did not adopt the gold standard until 1900, almost one hundred years later.

This new gold standard utilized a ratio that defined the rate at which paper money could be converted into gold. For the United States, this ratio was originally set at 40 percent, requiring sufficient physical gold bars in the nation's storage reserves to equal 40 percent of the paper money in circulation. As a result, the amount of gold held by any given nation would not necessarily be equal to its money supply but rather would be a representative fraction. This is known as a fractional reserve system. Paper money allowed nations to expand the size of their money holdings beyond the amount that could naturally occur when *money* was still defined by a one-to-one ratio between its representative value and the weight of metal contained in coinage. Provided those using the system had faith in the issuing authority that they would honor the stated value of the paper with the gold held in the authority's vaults if necessary, the fractional reserve system (with paper money) appeared to solve most problems associated with the burgeoning trade networks worldwide.

However, this fractional reserve system did not account for the devastating destruction and necessary reparations that needed to be made between nations following the First and Second World Wars. After World War II, there was simply not enough physical gold worldwide to support the amount of paper money needed to settle debts between trading nations. As a result, the United States reduced the amount of gold held relative to paper money in circulation to 25 percent in 1945, and finally entirely eliminated the requirement for gold reserves to back paper currency by 1968. The last ties to the original, physical roots of modern currency had now been severed.

Electronic and Virtual Money

Not requiring nations to hold gold reserves still proved an insufficient remedy for supporting world trade in the aftermath of WWII. So in 1969, the International Monetary Fund (IMF), which had been created under an international agreement at Bretton Woods following World War II, introduced a new form of money, known as the Special Drawing Right (SDR). Its value was originally based on the five major currencies at that time: the US dollar, the British pound, the German deutschmark, the French franc, and the Japanese yen. To this day, SDRs can only be held by member central banks of the IMF in order to settle the balance of payments between nations.

Unlike paper money or coins, SDRs cannot be held or felt. They exist only in the computerized accounts of the central banks. With the advent of SDRs, money now exists that no longer has a physical shape or imprinted image. It is instead a series of coded 1s and 0s representative of original currency. However, according to the earlier definition of *money* given by the *American Heritage Dictionary,* provided SDR deposits are "readily liquefiable," then they are indeed considered money in this day and age. It is worth noting that individuals do not participate directly in holding this form of money. Corporations and financiers are allowed to use SDRs as a basis for some financial transactions, although they are not permitted to transact directly in SDRs.

Apart from SDRs, other forms of electronic money in use today include plastic cards with magnetic strips or computer chips that enable transfers of money to take place. These plastic cards, known as stored-value cards, are not to be confused with credit cards, which are a form of loan. Further developments in technology have encouraged the evolution of electronic money at the consumer level. Cell or mobile phones can now be fitted with the capability for engaging in a variety of money-related transactions, including purchases, deposits, and transfers. This digital incarnation of money is firmly entrenched in Japan, and as of the past decade, has made steady inroads into other highly developed urban areas including Australasia, Europe, and the United States. By 2013, more Europeans than Asians were using mobile devices for payment, with Americans trailing behind both. Worldwide payments using mobile devices stood at $3.2 million in 2003. Mobile payments accounted for over 14 percent of all purchases worldwide as of 2013, according to Ayden, a Dutch payment-processing company.

In a parallel online universe, truly virtual money untethered to real-life resources has come into existence. Second Life, a 3-D virtual world created by Linden Lab, and other similar sites have created their own electronic money. These "currencies" can be bought using "real" dollars, pounds, euros, yen, and so forth and then are stored in electronic accounts. An exchange rate is posted, and trading takes place in this market in a parallel fashion to regular currency markets. According to press releases, Ailin Graef made her first million in real US dollars in 2006 through extensive real estate holdings in Second World.[5]

In a similar vein, bitcoin is a digital currency that has gained broader acceptance in the real world. Rather than being used in virtual online games, holders of bitcoin currency make and receive payments in this cyber cryptocurrency.[6] The creation of this form of money currently lies outside the jurisdiction of governments, having been created and accepted solely by individuals. The German government has acknowledged bitcoins as "private money" and as such now has policy relating to taxation of certain transactions involving bitcoins.[7] In 2014, the Japanese government recognized bitcoins as a commodity that could be traded as such, but not a currency.[8] Following the Japanese government's stance, the US government through the IRS ruled that bitcoins would be treated as property and thus subject to the same taxation rules.[9] As with the German government, these rulings will give governments some latitude over taxing transactions involving bitcoins, while not controlling the cryptocurrency directly.

After the financial crisis in Iceland, more capital controls were put in place. Bitcoins are viewed by the Icelandic government as a way of circumventing these controls, and thus banned. In response to the ban, a new cryptocurrency named Aurora coins came into existence and 10.5 million were "airdropped" to Icelandic citizens. Other countries, including Cyprus, Scotland, and Spain have likewise seen the creation of national cryptocurrencies since the beginning of 2014.[10]

From this brief exploration of the evolution of currencies worldwide since the advent of Babylonian coinage, it becomes evident that money carries more weight than simply the physical coins, bills, and mobile devices in people's pockets and purses. When money was used only for exchange within a closed society, the resources provided by basic elements of nature sufficed. Money has transformed over time, from representing physical evidence of the resources a person had expended to acquire it, to its current electronic state, where there are no observable physical attributes. The relational qualities of money that used to exist,

even two hundred years ago, have been abolished in favor of "virtual" representative currencies that enable nations and corporations within them to participate in large-scale global trade. Money does not need to be held and handed over—one swipe of a cell phone over a reader will digitally transfer money from one account to another.

Financial traders can see numbers on their screens and press a button to initiate a trade taking less than one second to complete. People now must imagine what their resources look like, as there is no longer a physical representation of the financial resources they supposedly own and owe. Third parties keep computerized tallies as to how much any individual or institution holds at any given point in time. These amounts fluctuate with changing markets, their value no longer fixed. Rather than needing dynamite to blow open a safe, stealing entire bank accounts has become possible without ever physically stepping foot inside the bank. Not only has the threat of physical danger diminished while engaged in the act of digital robbery, it is now possible to commit the near perfect crime. Perpetrators leave only minute electronic traces that are difficult to detect, and walk away with more money than a physical robbery would allow. Bank accounts, however, have become small potatoes compared to the larger virtual holdings of cash and as such are no longer the only target of potential thieves, as we will see in the next section.

As can be well imagined, this dematerialization of electronic money has allowed for more distortion and disconnection to occur. More recent generations of people, particularly those born after 1990 who have grown up with electronic gaming and computers, may not be fully aware of the connection between the numbers on their screens and what those numbers represent, relative to people. Traders currently in their twenties have grown up accustomed to plastic and electronic money, both of which inherently disconnect the paying for a good with the receiving of that good. To them, trading screens are akin to the screens showing movies and video games with which they played while growing up—virtual worlds and places where everything can be reset. Under these circumstances, it is easy to understand how a lack of empathy may be evidenced. Many in this generation of traders may cognitively understand the greater ramifications of their actions. Yet on an unconscious level, they may experience numbers on a screen impersonally, not fully grasping the connection to another living being, whose life situation can be seriously damaged by the trader's actions. To put it more succinctly: the original relational component of money has disappeared. In its place is a

supposedly rationally based pure exchange function that feeds commerce on a global scale.

The Evolution of Markets

Securities exchange markets were not an innovation in 1792 when the precursor to the New York Stock Exchange was created under the Buttonwood Agreement (so called because of the Buttonwood tree under which the agreement was signed).[11] Prior to the Exchange in New York being established, Amsterdam, Venice, and London all had infrastructures in place through which financial securities could be traded. Trading in derivatives was also well under way in London from the beginning of the eighteenth century until the passing of Barnards Act in 1734, whereby time bargains, which included derivatives, were deemed illegal. At that juncture, it was decided that time bargains were considered to be synonymous with gambling and hence banned.[12] Given the involvement of derivative contracts in the financial crisis of 2008, it would appear that concerns about time bargains are also not a new phenomenon in capital market history.

Historical records show that buyers and sellers met to conduct private sales as far back as the 1500s in London.[13] Coffeehouses were favorite venues for such activities, and Jonathan's Coffee House in London was initially selected to launch a formal exchange forum in 1791, including specific rules governing participants' behavior. This endeavor to "clean up" the markets lasted less than a year, as those who did not wish to adhere to the newly laid rules filed suit and won.[14] The rules were straightforward even by modern standards, with the primary objective of "ensuring speed and trust":

> All present were active participants, ready to buy or sell when the opportunity arose, and each possessing a reputation for honoring their part of the bargain. In turn, those who did not fit these criteria or meet the standards set would be excluded.[15]

These concerns, voiced by those interested in establishing a reputable forum for engaging in securities trading during the late eighteenth century in England, are similar to those expressed by the public and some financial professionals in twenty-first-century America. The need still exists for a venue in which to conduct large-scale trading, where participants can be trusted to act as agents working in the best interests of

those on whose behalf they are trading. A market without trust cannot function successfully over time. This lack of trust is a major issue confronting the exchanges in the United States today, where transparency is often opaque and the general public frequently needs guidance from third-party sources to begin to understand what is taking place.

This same issue surrounding derivatives and the trading of options that was broached in the 1700s was raised again in England during the 1950s. Options had eventually made their way back into the legal trading culture in London in 1860, 12 years before over-the-counter options became available in the United States. Once again, trading in options in England was banned during the 1930s due to restrictions imposed during wartime—the risks had become too great. A push to reintroduce options came after World War II from trading houses that were trying to boost declining business during the period of postwar reconstruction. In 1954, the newly knighted and well respected Sir J. B. Braithwaite, as Chairman of Council (an elected position he held from 1949 to 1959, representing the membership of the London Stock Exchange), was against options being reinstated, noting, "[W]e may need to consider whether, if we restore options, we may not be undoing something of the increased prestige and public regard that we have gained in recent years."[16] It is hard to disregard the parallels between the British public's perception of the speculative character of their postwar markets, particularly the derivatives markets, and the American public's perception of their own markets post-2008. The trust in markets, and those participating in them, was at a low level on both sides of the Atlantic. In both situations, politicians were pressured by the public not to succumb to the demands of the financiers. Eventually, postwar England was forced to reinstate options trading in 1958, in part so they would not lag behind New York and other foreign markets where such trading practices were permitted.

Stock markets during the twentieth century were located in major cities within a given country, such as London, New York, and Tokyo. Foreign companies began listing on exchanges outside their home countries in order to gain better access to capital. Doing so also helped to promote a more global presence, while at the same time allowing companies to appear as "local" in markets where they listed. This trend of cross listing served to reduce the naturally occurring geographic segmentation of markets, which had previously contributed to the phenomenon of minimal correlation in returns between the markets. The benefit of this minimal correlation had been the basis for the higher portfolio returns that could be achieved by diversifying internationally, alluded to in chapter 2.

As markets became more integrated during the latter half of the twentieth century, more related movements between the previously independent markets became evident. Volatility, and hence the risk of investing in different markets changed, and, even before the 2008 global financial crisis, it was apparent that markets had become linked in such a way that a crisis in one market could quickly impact other markets worldwide. Academic researchers in the field of the geography of finance, such as Gordon Clark and Dariusz Wójcik, have further shown how the geographic location of financial centers influences the herd behavior of financial professionals.[17]

Changes within the major exchanges themselves were also occurring during the last two decades of the twentieth century. In 1986, the London Exchange closed its trading floor and moved to a completely electronic trading system as part of the deregulatory event known as the "Big Bang." Eleven years later, in 1997, an even faster and more efficient electronic trading system was put in place, with similar changes taking place around the same time in the United States. Quotes on electronic communication networks (ECNs), such as Instinet, were made accessible to the public in 1997 with the implementation of the Order-Handling Rules. Prior to this, market makers and institutional investors were able to use Instinet or other ECNs to buy and sell stocks without appearing publicly on the exchanges. This same year also saw a change in the bid/ask quotes, which resulted in a narrowing of the spread (the difference between the rate at which a broker is willing to buy and sell the same security) to a sixteenth of a dollar. These changes in the two major US stock markets reduced the profit-making ability of dealers and can be seen as marking the start of a new phase in financial markets.

The latter part of the 1990s also saw the creation of another ECN that would have a major impact on the markets. Joshua Levine was working behind the scenes to design a direct competitor to Instinet, with the intention of making markets increasingly efficient and transparent. He called his new network Island. A skilled and brilliant computer programmer, Levine learned the order flow of markets so well that he was able to develop a program that would take his knowledge and build on it. Island was the first electronic venue that allowed traders to make their trades away from the exchanges themselves and has been credited as the impetus for transforming markets into their current electronic state. By all public accounts, Levine did not set out to make billions of dollars—what he wanted was to level the playing field for all market participants so that market insiders could not make abnormal profits from others' trading. His idea was to pay traders for providing liquidity in the markets

and charge those who removed this liquidity from the market. Any difference in pricing would go to Island. This format became known as a maker-taker pricing system. When Island began this practice in 1998, it was alone in doing so. Such pricing systems are now common practice in electronic trading platforms worldwide, including the NYSE and other large exchanges, and has helped to generate additional revenue.

One issue that arises from this practice is the ensuing narrow spread between buy and sell quotes. As a result, the volume of trades must be high in order to compensate for reduced profits on smaller trading lots. Consequently, more computer-based programs were written and implemented to take advantage of the small spreads, which shrank again when the SEC mandated in 2001 that all stock quotes be in terms of dollar and cents. High-frequency traders are particularly attracted to this pricing system, as it offers an opportunity to get "in and out" of the market quickly whilst still making a profit. According to Dave Cummings, the founder of a high-frequency trading firm based in Kansas City, Missouri, the average time stocks were held by his firm in 2008 was 11 seconds.[18] In 2010, Cummings declared that, over the previous four years, his firm had not experienced a single trading day in which the firm had lost money.[19] This seemingly improbable feat of consistently making money over an extended period was made possible by the existence of the maker-taker pricing system, not through some Ponzi fraud scheme, as was the case with Bernie Madoff's consistent winning streak in the market.

One of the benefits market participants saw in ECNs was the ability to buy and sell shares without dealing directly with the exchanges, where the stocks were actually listed. By 2010, only 25 percent of shares listed on the NYSE were actually traded through the NYSE; the vast majority were bought and sold on other platforms. This ability to not trade directly on a given exchange has created a market in the shadows with little transparency or accountability—precisely the opposite objective Josh Levine strived for when creating Island. These "dark pools" enable institutional investors to conduct their investment strategies in such a way that it is difficult to tell who is instigating which trades and exactly how large or small any given trade is. One obvious advantage of such pools is that there is less market impact and dissemination of information when a large block of stock is being traded, as now the buyer/seller remains unknown, and the block can be sold in smaller lots more easily.

Institutional investors can also use the ECNs to direct trades to those venues where they will get the best price. On Wall Street, traders talk about "looking down the pipes" to see where their orders are going. Being

able to get an order in faster than a competitor is paramount in such a market. This need has led to financial technology firms that specialize in locating their computer servers in as close physical proximity as possible to an exchange's servers. Initially, firms started buying or leasing real estate next to the NYSE to reduce the length of cable needed to hook up to the exchange's servers. The NYSE now has a huge center housing its own servers, where ECNs can pay a fee to position their servers, giving them meters of distance of advantage, depending on how much they are willing to pay. Milliseconds make a difference in this world.

From this, it is apparent that computers and their accompanying software are paramount in making these electronic platforms function optimally. This change has led to a need on Wall Street to employ people who are highly proficient at developing programs to conduct trading. Algorithmic trading employs pre-programmed trading instructions that can essentially run on their own and are effectively automated trading systems. These trading algorithms have evolved quickly since their introduction, progressing from using basic trading strategies to developing self-aware strategies that react to the strategies of other programs in the market. Since then, artificial intelligence has been employed so that the trading algorithms now learn and update their strategies faster. These programs have the capability of making decisions significantly faster than humans. These technological developments have led less scrupulous firms to engage in practices that are not permitted in circumstances where humans are conducting the trading. One strategy employed is to list thousands of prices within the space of milliseconds with the intention of never trading them—it simply helps to move the price, so that the trading algorithm can go back in and make a profit from other firms that step in to trade at what they thought was an actual quote. With such small spreads, it is the volume that makes such actions profitable. Owing to the speed of the programs and computers, those participating in gaming the system are difficult to catch immediately.

It has only been since outside observers noticed markets starting to behave in an extreme manner that some members of the financial industry openly expressed concerns over whether these lightning-fast programs were as beneficial as they were being touted by the heads of exchanges. The so-called Flash Crash of 2010 is one event that has stuck in most peoples' minds. On May 6 of that year, the Dow Jones Index plummeted by more than 500 points in less than five minutes, regaining the 500 points within the next five minutes. One hedge fund officer described the situation to the *Wall Street Journal* as "mayhem,"

likening the speed with which it happened to a torpedo.[20] Some companies became almost worthless within those first five minutes, bouncing back or close to their previous values with the upswing in the following five minutes. According to later reports, some high-frequency traders stepped out of the market as soon as they saw the free fall. That action shifted the liquidity in the market. What people outside the industry are not aware of is that smaller crashes, similar to but not at the same scale of the Flash Crash, are occurring with increasing regularity. Politicians, working with people from within the industry, have proposed more regulations to govern these market-trading facilities in an effort to increase transparency and accountability within the market. Yet not everyone is on board. Insiders see high-frequency trading as providing liquidity to the markets, thereby making the markets more efficient than they would otherwise be. Exchanges and traders alike make millions of dollars from trading via high-speed algorithms. They do not want to see this lucrative cash stream stemmed or cut off, having already capitulated the human-controlled specialist system with its lucrative profits made from possessing proprietary information.

While the understaffed and underfunded Securities and Exchange Commission in the United States is busy trying to figure out how to regulate this new, technologically advanced market, other traders from around the world are likewise busy working out how to reduce the time it takes to execute an order. Two researchers at the Massachusetts Institute of Technology have figured out the optimal locations globally for hubs to cut times. New cables are being laid in oceans to connect computers of traders with computers of exchanges, and microwaving of orders has been implemented, as it cuts enough time to warrant its use despite any problems that may be encountered with bad weather conditions. There is a frenzied feel to the activity of high-frequency traders worldwide that drives them to further compress time and distance, just so they can make more money on increased volume rather than through any other significant advancement that has taken place within the market. The economic underpinnings of the purpose of markets have all but been forgotten. Markets have become segmented once again, but not geographically. Now one group of participants doggedly searches for undervalued financial assets using old-school fundamental analysis to hold stocks for the long-term, as their way of gaining value. In a parallel universe, computer-driven, artificial intelligence algorithmic traders are scanning the same markets to take advantage of any potential changes in the markets themselves that would provide them a profit. These algorithmic traders have

essentially become predators, not only in their own algorithmic universe, but also in the slower, value-driven world.

Programming the Markets

The incredible ability of the programs using artificial intelligence to conglomerate and analyze vast swaths of data in seconds, which would normally take a human analyst days, affords an advantage that is disconcerting. Such programs have the capability to determine the outcomes of listed companies' actions with reasonable probabilities before the companies themselves have even finished analyzing their own data. This forecasting ability based on sophisticated algorithms gives the artificial intelligence (AI) traders an advantage in trading in the markets over human traders, who will take days to catch up. Yet such technological advantages also allow for abuses of the trading system.

One of the major disconnects between the programs, programmers, traders, and managers of firms is that programmers understand the programs better than anyone using them. Traders who use the programs are taught which buttons to press under different circumstances. This distance between the traders and their tools has led to critiques about the use of such programming. Explanations to account for incorrect selection of an algorithm, which subsequently causes problems in the market, include the "fat finger" theory. In layman's terms, someone accidentally presses the wrong key on a computer keyboard. It was suggested as a possible cause of the previously mentioned 2010 Flash Crash but later disproven. Overseeing the programmers and traders, the managers' focus is on the bottom line—how much money is being made each day. Thus, each player within the paradigm has potentially a different motivation for being in the game.

Although it is true that the increased volume of high-frequency traders has brought more liquidity into the markets, these same traders step out of the market if conditions are not right. Unlike designated market makers and the specialists before them, high-frequency traders are not responsible for maintaining orderly markets and feel no obligation to remain in the game if it is not in their best interests. Such actions drop the liquidity below levels where it would have remained had they been required to stay in, as human specialists are obliged to do. Essentially, many of the high-frequency traders can be likened to online gamers trying to rack up the highest score; they play for themselves, not with an

eye to how the overall market is fairing. As a result, yet another unintended consequence of the ECN platforms and the accompanying high-frequency traders has been their negative impact on asset managers, particularly those participants on Wall Street who are in the market for the long run. These managers are charged with looking after retirement funds, endowments, and other long-term investments. Unlike traders or speculators, they are not interested in volatility—they want long-term fundamentals to drive profitability.

So what becomes evident is that there are actually two tiers of participants in the markets: those who trade to make money from trading (and in finance parlance, make markets more efficient) and those with buy-and-hold strategies. Efficient market proponents would argue that both are necessary to drive efficiency in the markets. Yet the markets of today no longer have the same technological framework as when the theories were developed. Speed has changed the environment within which markets operate, and the theories have not kept up. We must also keep in mind that, since 1987, individuals have become responsible for their retirement savings through defined contribution plans, the funds of which are tied up in the markets. As a result, the general public is far more alert than in previous times to any volatility or downturn in the market that they perceive might affect their ability to live comfortably in old age. Although financial professionals may manage these funds, anxious pre-retirees and retirees can and do shift their funds out of the markets into cash accounts if they become overly concerned about losses.

High-frequency traders play in an entirely different universe than average people concerned about their retirement accounts. In the middle are the money managers—those individuals with a fiduciary duty whose task it is to manage money on behalf of others. Managers with whom I have spoken are clearly aware of what is going on but are helpless to control the extreme volatility that can occur with algorithmic-driven trading. As of this writing, there are plans backed by the Royal Bank of Canada to start a new exchange, Aequitas Innovations, Inc., which will "cater to retail and institutional investors," to avoid the problems resulting from the markets today.[21] According to Bloomberg, Aequitas "may try to thwart high-frequency firms by avoiding a pricing system used on many venues that pays rebates to traders for supplying bids and offers to buy and sell . . . known as maker-taker."[22] Although this exchange will not be available until 2014, there is speculation that it might attract people back to the market if they perceive that it (once again) is a level, non-AI-dominated playing field. The New York Stock Exchange has also announced a new platform that will be available to long-term investors.[23]

Thus, markets have moved from their person-centric orientation to computer-centric in the span of less than 20 years. Those individuals who occupy the space in financial markets today have different skill sets than their predecessors. With the increase in the number of people who have exceptionally strong mathematical backgrounds being employed in the investment sector of finance, there has been a shift from the fundamental economics of finance to capturing markets in terms of equations that can be used to make profits. Older Wall Street professionals within the trading world exhort college students who want to go into finance to become proficient in computer programming and mathematics. They have seen firsthand how these two disciplines have come to dominate their world and have impacted their very survival. Many are aware of their own deficiencies—in particular, their own unease with computer programming, which is deemed essential in today's financial market environment.

Evolution of Financial Theories

Underpinning the programs that run the markets are financial theories that have been developed over the past 50 plus years. A number of financial theories have shaped the face of finance and how it is conducted. The seminal paper on separation of financing and investment by corporations, coauthored by Franco Modigliani and Merton Miller and mentioned in chapter 2, is still discussed today. Modigliani was awarded the Nobel Prize in Economics in 1985 for his work, and Miller was recognized in 1990. The impact of their work and extensions to it has reverberated through the decades. On the investments side, Harry Markowitz popularized Modern Portfolio Theory (MPT) in the 1950s with the publication of a paper, followed by a book pertaining to the allocation of securities within a portfolio to achieve diversification.[24] Like Miller, he too became a Nobel Prize laureate in 1990. William Sharpe also conducted extensive research in this area and is also credited with contributing to its development. Modern Portfolio Theory, as developed by Markowitz and Sharpe, has been key in developing new insights into optimal portfolio management. In particular, asset allocation practices have been informed by their insights regarding the management of risk while still achieving maximum returns.

In the 1960s, two important theories evolved that have impacted how finance is conducted worldwide. The first, developed by Eugene Fama, is known as the Efficient Markets Hypothesis. The essence of his hypothesis is that market prices reflect all known information and therefore no abnormal returns can be made. Three levels were defined: the weak

form, semi-strong form, and the strong form. Extensive studies testing the weak form, which looks only at historical prices and the information contained therein, show that markets are weak-form efficient—that is, no abnormal profits can be made using historical data. The semi-strong form considers the inclusion of all publicly available information and again reaches the same conclusion. It is only the strong form of the Efficient Markets Hypothesis that takes into account privately held information, which does not hold. Thus, market participants who have information not known to others are able to make abnormal profits trading on the information. The Nobel Prize committee recognized Eugene Fama in 2013 for his work relating to market efficiency and the subsequent development of market-index funds.

Also in the early 1960s four academics were individually working on another theory, which subsequently became known as the Capital Asset Pricing Model with applications to both corporate and investment finance. Jack Treynor, William Sharpe, John Litner, and Jan Mossin each approached the problem of how to price an asset from different perspectives. Both Treynor and Litner came from the corporate side, basing their individual theses on the work of Modigliani and Miller. Sharpe and Mossin attempted to solve the question of how to price an asset from the investment angle: Sharpe's interest was in optimal portfolio selection using the work of Harry Markowitz, whereas Mossin was concerned with market equilibrium.[25] It was Fama who wrote an article reconciling the various approaches.[26] As with the Option Pricing Model, not everyone was acknowledged for their work on the model by the Nobel Prize committee. Litner and Mossin both died prior to 1990, when Sharpe received the Nobel Prize in Economics. Treynor, although credited with having the first formulation of the model, opted not to publish his work when hearing that Sharpe was publishing his own version. Consequently, Treynor has never received public acclaim for his contributions.

The Capital Asset Pricing Model essentially prices the risk of a given asset into the return that an investor would require to hold that risk. The model states that the return of any asset should be comprised of a base rate of return, which is given by the rate on a risk-free asset, and then a premium, which is dependent on the amount of risk taken. The terms *beta* and *alpha*, which are used extensively within the investment community to describe the risk and return of an asset, are derived from this model. Beta determines the covariance of an asset with the market and hence is a measure of risk. Alpha measures the excess return that can

be earned (if any); hence the phrase "seeking alpha" among investment managers trying to outperform the market.

More Greek letters are part of the Black-Scholes Option Pricing Model, including terms such as *delta*, which links the price movement in the underlying asset to the price movement in the derivative. The model itself has opened up entirely new avenues of pricing risk and has been applied to corporate finance situations for evaluating projects.

Although researchers have been drawing on these models and extending them, no major breakthrough theories or models that have radically changed finance have been forthcoming in recent years. However, some researchers are currently integrating behavioral finance and evolutionary biology into existing models. One such researcher is Andrew Lo, a professor of finance and director of the Laboratory for Financial Engineering at MIT, who has applied an evolutionary biology framework in the development of his Adaptive Markets Hypothesis. His model is based on the assumption that "individuals act in their own self interest," which, as he noted, is the same hypothetical base as the Efficient Markets Hypothesis.[27] Lo's approach is based on rationality, which is hardly surprising given Lo's training as an economist and subsequent career path that focused on mathematics and modeling in financial markets. Both Lo's model and the CAPM are culturally determined individualistic approaches to market functioning, which is not surprising given both hypotheses were developed in the highly individualistic United States. By its very nature then, Lo's evolutionarily based model lays the foundation for the possibility of psychopathic behavior emerging by participants engaged in the market.

Lo's subsequent five components in the model describe financial markets well: individuals make mistakes, they learn and adapt, competition drives adaptation and innovation, natural selection shapes market ecology, and evolution determines market dynamics. The outcome that the richest survive lends support to the contention of many observers that the financial investment community has a disproportionate share of psychopaths. Just because market participants are behaving rationally in terms of their own best interests does not imply that they satisfice or optimize for those on whose behalf they are supposedly acting. Societal structure, the role of government, and the expectations of financial markets to deliver reliable funding for retired individuals have all changed significantly since 1987, so much so that the more psychopathic-friendly individualistic market model may no longer be appropriate. The high-anxiety feedback loop that investment professionals encounter in their

daily work lives is now experienced by nonfinance professionals who are relying on financial markets to provide a safe retirement income stream.

Probably the most radical affront to the models described above has come from behavioral finance. It has slowly been making its way into the mainstream of finance with its emphasis on the psychological aspects of how decisions are made by market participants. The first, and thus far only Noble Prize winner for contributions in this field, is Daniel Kahneman, who received the award in 2002. Much of Kahneman's work was in collaboration with Amos Tversky, who died prematurely before their work was broadly recognized. Their most well-known contribution is Prospect Theory, which is a theory of choice within the context of uncertainty and therefore risk.[28] Kahneman's subsequent book, *Thinking, Fast and Slow,* makes his work accessible to the general public.[29] In it, Kahneman compiled many of his ideas that challenge the underlying rationality assumed of market participants in widely held economic and financial models. Linking the findings of behavioral finance researchers and traditional economic models are works by well-known financial academic researchers, such as Haim Levy. Levy's article asserting that the CAPM is "alive and well," even in the context of behavioral finance findings is a popular download on the Social Science Research Network (SSRN) site.[30]

The interest displayed by financial researchers in behavioral aspects of finance has led to an increasing number of psychologically based research papers seeking to explain the who and why of actions taken by market participants. Delving further into this new line of inquiry is the path taken in the following chapter.

5

Opportunities and the Changing Players

In the previous chapter we traced the evolution of money, markets, and financial theories and observed that all three have transformed over time and at an accelerated rate since the mid-twentieth century. The reconstruction of the world economy after the Second World War provided the impetus for a new kind of money that was intertwined with subsequent shifts in markets and financial theories and driven by changes in technology. Behind all these movements stand the humans who effected the change and in turn are affected by the outcomes of their actions. In this chapter we will address the changing faces and personalities of the people who inhabit the universe of finance. The fundamental human-related trading that has existed for centuries has been inextricably altered by the speed of technological advances, causing ripple effects in all directions. It would be wise to take note of an observation made by physicist Albert Einstein in a letter he wrote in 1917: "Our entire much-praised technological progress, and civilization generally, could be compared to an axe in the hands of a pathological criminal."[1]

Today it is more likely that an investment professional will hold an advanced degree in mathematics or computer science, viewing the markets as an optimization problem to be solved. Master's degrees in finance are available with a strong focus on these skills, but the training is not usually as rigorous as a pure mathematically oriented program. People pursuing this track are known as "quant jocks." Their rise in the finance world mirrors shifts in trading technologies and programs. The more recent modifications to traders' programs have evolved in large part in response to the markets themselves rather than to any underlying corporate and

investment fundamentals. These personnel and technological shifts have become embedded within the larger high-stakes, high-risk trading cultural framework described in chapter 3.

Screening for the Perfect Employee

Over the past three decades, the quest for the perfect employee on Wall Street has taken advantage of psychological assessment tools to screen for traits that would help financial firms achieve their business goals. Michael Lewis wrote about the 1980s on Wall Street in his book *Liar's Poker.* In the preface he stated, "Never before have so many unskilled twenty-four year olds made so much money in so little time as we did in this decade in New York and London."[2] Employing traders in their early twenties provides financial investment companies with lower labor costs overall. As discussed in chapter 2, firms offer young graduates the opportunity to work extremely long hours at low wages to gain experience, rather like an apprenticeship. However, this potentially cost-saving strategy may have also unwittingly increased the incidence of behaviors that mimic psychopathic traits.

The risk-seeking characteristics possessed by young men in their early twenties have been desired by Wall Street firms seeking to expand their markets since the 1980s. Neuroscience has shown that the brain development of humans is not complete until approximately the age of 25 years. Prior to this, the cognitive awareness of risk is not fully integrated and young adults are more likely to assume risky behaviors. Functional MRIs show that the goal-oriented and rational thinking portions of the brain are the last to develop fully; instinctual areas of the brain are used prior to that, which may explain some of the more reactive types of responses displayed by those in their early twenties.[3] During the 1990s, integrating traditional finance education and trading room technology became the latest innovation in many business schools' curricula. By introducing primarily young men to trading technologies prior to full brain development, there is a heightened possibility that they will not fully appreciate the riskiness of the trading positions in which they engage. As pointed out earlier, anthropological studies focused on the investment finance culture have found employees have a short-term job expectation. If they win, they keep their job; if they lose, they move on, having been indoctrinated into investment finance culture. The accepted and encouraged use of drugs and alcohol within the finance culture also affects brain health and functioning of these young adults. The myelin sheaths that protect

the brain are not completely laid down until the mid-twenties, leaving the prefrontal cortex, in particular, vulnerable to harm. This development phasing subsequently affects decision-making abilities.

Some investment trading firms in the 1990s screened potential employees using the Myers-Briggs test, which is based on psychiatrist and psychoanalyst Carl Jung's theory of psychological types. Jung proposed that there are different dimensions to personality, each of which lies upon a different spectrum. How these dimensions interact with one another provides greater insight as to how a person approaches the world. Each person then is identified with a typological structure comprised of the four dimensions considered by Jung. The first dimension (extraversion/introversion) determines how a person is oriented to the world. Those who are more introverted use internally located benchmarks to assess information. Conversely, extraverts direct their energy outward. This primary orientation determines how the remaining three dimensions are interpreted. The second dimension relates to sensation and intuition. Those who are more sensate process information through the physical senses—sound, visual perception, and so forth, whereas intuitive types are more focused on possibilities. Feeling versus thinking is the third dimension, with the latter being oriented to logic and the former to tone. The final dimension examines the attitude of judging relative to perception. Those who score high on judging tend to like organization and clear goals, whereas high scorers on the perceptive scale tend to be more flexible and spontaneous.[4] Thus, employers use the Myers-Briggs to find good fits between potential employees and the hiring needs of their firms. What constitutes a good fit depends on what traits are deemed desirable for a particular position.

Under Jung's typology there are a finite number of combinations possible. Modern researchers employing the Myers-Briggs test have categorized the various combinations so that individuals and counselors can quickly assess which sorts of careers match well with specific personality types. For instance, INTJ (introverted, intuitive, thinking, judging) and INTP (introverted, intuitive, thinking, perceptive) types fit well in positions that require problem solving and creativity in an individual capacity. ISTJ (introverted, sensate, thinking, judging) and ISTP (introverted, sensate, thinking, perceptive) types are good matches for work requiring analytical skills and attention to detail. Mathematics and programming are examples of ideal fits for an ISTJ/ISTP. ESTP (extraverted, sensate, thinking, perceptive) and ESTJ (extraverted, sensate, thinking, judging) types would likewise match well with positions in business and applied

technology—for example, programmers and traders who interact with the public. ENTP (extroverted, intuitive, thinking, perceptive) and ENTJ (extraverted, intuitive, thinking, judging) types would function well in similar positions, but with an orientation to management. Business schools find that students who perform well in finance tend to be extraverted, unless they are more involved with the modeling and development of theory; overall, ESTJ and ISTJ types dominate business school classes. Financial analysts tend to dominate the types ENTJ and INTJ.

Investment banking houses that started to increase their focus on trading profits during the 1980s and 1990s not only needed younger employees who were willing to take greater risks, but also individuals who could excel at making abnormal profits in the trading arena. They were seeking people who could develop rationally based trading strategies, making clear-cut decisions based on facts rather than other less tangible factors. High scores on the dimensions of thinking and judging might be indicative of potential success in trading, though not exclusively. Having a strong intuitive or feeling approach to market movements might also be beneficial, but under different circumstances. For this purpose, the Myers-Briggs test was used to differentiate people according to type, so that employees could be used to their fullest typological potential to make trading profits for the firm.

Another desirable trait seemingly related to the ability to make decisions based on facts alone or without emotional attachment was lack of empathy. If a trader were less emotionally involved with the positions he or she held, then he or she would be more likely to make rational decisions to buy or sell. This makes sense from a behavioral perspective. There are plenty of anecdotal tales of investment professionals becoming emotionally attached to a stock (or any other financial asset) and subsequently holding onto it beyond the time when it (rationally) should have been sold.

There are at least two other psychopathologies that have traits that Wall Street would find beneficial and for which lack of empathy is an indicator: Narcissistic Personality Disorder and Autistic Spectrum Disorders (ASD). Neither of these psychopathologies are considered inherently dangerous to society. People who fall within the high-functioning end of the Autistic Spectrum Disorders (formerly known as Asperger's syndrome) in particular are commonly linked with possessing specific, highly developed skill sets that are frequently in high demand within the new trading model. It may well have been this latter group that was being targeted by investment houses through the decision to screen for lack of

empathy. However, by selecting to screen potential employees for lack of empathy, firms either knowingly, or unwittingly, were also screening for psychopaths. As Asperger's syndrome and psychopathy both have a lack of empathy in common, it is worthwhile to spend some time examining Asperger's syndrome to understand the differences between the two diagnoses.

Autism Spectrum Disorders and Asperger's Syndrome

Popular media stories in the United States (as well as other Western countries) have frequently shone a spotlight on the rise of autism spectrum disorders, Asperger's syndrome in particular. Best-selling books, such as *The Curious Incident of the Dog in the Nighttime*, and popular television shows, such as the forensic-anthropology drama *Bones*, the medical drama hit *House*, and the comedy hit *Big Bang*, all feature lead characters either identifying as or displaying symptoms of Asperger's syndrome. With the popular success of these heroes, ASD has become a popular topic in the mainstream of American life. Currently, it is estimated that approximately 1 percent of the population in both US and non-US countries fall under the umbrella of Autistic Spectrum Disorders. ASD is deemed to be primarily genetic, though recent research has shown that environmental factors may be an influencing factor: males are four times more frequently diagnosed with ASD than females. Interestingly, the most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)* has redefined Asperger's syndrome and reclassified it under Autistic Spectrum Disorders with specific qualifiers relating to intellectual capabilities and language skills, rather than giving it its own category. No longer labeled as a pervasive developmental disorder, Asperger's syndrome is now recognized as a subset of neurodevelopmental disorders. As with any autistic spectrum disorder, Asperger's syndrome is organic in nature, showing symptoms in childhood that continue into adulthood and is not the result of psychological trauma.

The primary factor accounting for the lack of empathy in psychopaths, as compared to those with Asperger's syndrome, is fundamentally different and results in dissimilar reactions to other aspects of relating. A study conducted by John Rogers, Essi Viding, R. James Blair, Uta Frith, and Francesca Happe, which was published in 2006, examined the "psychopathic traits in boys with autism spectrum disorders" to ascertain whether the malicious behavior observed in autistic spectrum disordered boys was similar to that in psychopathic boys, given the similar problem

with empathic abilities.[5] Rogers and his team found that Autistic Spectrum Disorders and psychopathy are "not part of a single construct," meaning that "psychopathic tendencies are not explained by ASD."[6] With this knowledge that the lack of empathy displayed by individuals with Asperger's syndrome is not of the same origin or quality as the lack of empathy that psychopaths exhibit, it is worthwhile to understand the essential features of Asperger's syndrome.

The original findings of Hans Asperger, who first identified the syndrome in 1944, were the result of observing children whom he described as "particularly interesting and highly recognizable."[7] Asperger was taken with what we now term "high-functioning" autistic individuals, and his observations provide a clear picture of behavioral patterns in those who do not have other coexisting diagnoses. He noted that the children all had a fundamental disturbance that resulted in "severe and characteristic difficulties of social integration."[8] Some of the children—the ones in whom Asperger seemed to have the most interest—were able to compensate for their social disabilities through what he termed a "high level of original thought and experience," which could lead to "exceptional achievements later in life."[9] Asperger also noted that this disorder was seen primarily in males and that it had a strong genetic component.

Similar to psychopathy, this disorder involves different brain physiology than that of a neurotypical person. Asperger claimed that the essential features of the autistic personality are evident by the second year of life. The initial problems that Asperger observed in the children during their school years did not go away with time. The underlying problem was still there but transformed by the demands of the person's stage of life. Many clinicians who work with high-functioning autistic individuals find that after the age of 40, most people diagnosed with Asperger's syndrome have developed enough skills to blend in reasonably well.

Asperger stated that this disorder is most noticeable when children are interacting with other people. According to Asperger, the children found the strong feelings within a family to be incomprehensible. It is within the small social unit that Asperger also observed acts of malice, which he thought to be calculated; however, the children did not seem to understand how much they had hurt others because their own sense of affect was so poorly developed.

In general, Asperger observed that there was a clash between oversensitivity and blatant insensitivity, which led to frustration and dissonance.[10] The children did not display affection easily. In fact, Asperger

observed, "[O]ne is struck by a distinctive emotional deficit which one may well consider an ultimate cause of their social disturbance."[11] This frequently leads to social isolation, partly self-imposed and partly a result of others not being comfortable with the Asperger social behaviors, one of which is a lack of awareness of personal space.

An Asperger's child might touch someone in a manner that is not considered socially appropriate or he or she might talk to someone in an inappropriate social manner. Asperger stated, "[A]utistic children are egocentric in the extreme," which suggests that these children were unable to place themselves in the other person's position and imagine how their actions might affect the other person.[12] This would account for the inappropriate social behavior, as well as the lack of empathy, that many people experience when interacting with people who have Asperger's syndrome. This lack of empathy, however, which is one of the distinguishing features of autistic diagnoses, does not mean that people with Asperger's Syndrome do not feel emotion (unlike psychopaths). As mentioned above, Asperger's children were both oversensitive and insensitive simultaneously. In working clinically with Asperger's syndrome clients, I have found they feel very deeply, but that feeling is more inwardly related rather than outward.

Asperger's children also observed themselves constantly. He noted that "they are an object of interest to themselves, and they direct their attention towards the functions of their body."[13] This inward attention to self may be seen as introspective from a psychological perspective but is more in line with being able to disconnect and become an outside observer of self. This characteristic may also present as being narcissistic to people who are unfamiliar with Asperger's syndrome. Unfortunately, narcissism is also a distinct feature of psychopaths, but in that disorder comes from a completely different psychological place.

One point that Asperger made about autistic intelligence was that autistic children produced original ideas and that mechanical learning was difficult for them. Thus imitating adult skills and knowledge was particularly problematic, as Asperger's children were "not interested in directing their attention to outside stimuli . . . they follow their own ideas, which are mostly removed from ordinary concerns, and do not like to be distracted from their thoughts."[14] These characteristics provide high-functioning autistic spectrum individuals with a skill set that would match almost perfectly with the traits desired by investment banking houses. The originality of their thinking can also be seen in their language, in terms of word choice.

Language was an important discriminatory variable for Asperger when assessing the children. He noticed differences in volume, tone, and flow of speech that exacerbated their inability to make social connections. One very distinctive feature is that words were taken literally. This can be a real source of communication difficulties. As an example, if a neurotypical person said in parting to someone with Asperger's syndrome, "I'll see you later," the person with Asperger's would weigh the meaning of each word carefully and probably arrive at the conclusion that they would meet in person again at some point in the future. It would not cross his or her mind (unless he or she had experience with this situation previously and coded in the sentence as having a different meaning) that this might be a social nicety, a way of ending a meeting and parting, with no particular expectation of getting together again. The Asperger's person would be expecting to see this person again. If that did not happen, the Asperger's person would feel emotionally hurt.

One reason that words are so important is that Asperger's children did not look at others in the same way as neurotypical children. Asperger noted that the children tended to use their peripheral vision except when intent upon some malicious act. Asperger also noted a dearth of facial expressions, which he linked to the lack of eye gaze. In "normal" two-way interactions, there is feedback between people through eye contact and facial expressions. Because the Asperger's children were not making eye contact, the need for facial expressions was unnecessary to provide further feedback. Thus computer communication is a perfect medium of interaction for people with Asperger's syndrome. Computers allow for human interaction, which most high-functioning autistic people desire. Furthermore, words are the key communication device, and precision can be used with written language.

The more intellectually gifted children are particularly creative with words. Puns are a source of delight to many in the Asperger's community, as they require both verbal ability and original thinking. Taking these two traits together often results in the ability to perceive in new and different ways. However, the tradeoff for possessing this capacity is often a narrow and specialized interest in a specific area. Children who are not intellectually gifted may be perceived as weird, while those who are intellectually gifted may be considered to be eccentric geniuses.

As most of the initial observations pertaining to Asperger's syndrome revolved around children, prognoses or outcomes of the disorder for adults were not directly addressed in his original work in 1944. After that time, Asperger was able to observe what happened to the children and the

primary discriminatory variable appeared to be IQ, a result that has been supported by recent researchers.[15] Researchers found that the children whose intelligence was below average found low-paying jobs or were not employed at all, becoming street people. Within the above-average intelligence group, some children rose to high-paying, professional positions. The positions they took frequently required abstract thinking, and it was their single-mindedness that helped them achieve professional success. Asperger noted, "[I]t is as if they had compensatory abilities to counterbalance their deficiencies."[16]

One of the leading researchers in the field, Uta Frith, emphasized that individuals diagnosed with Asperger's syndrome can become well adapted as adults, but problems occur due to "idiosyncrasies [and] their egocentric bluntness and fragility" that "make it difficult to live and work with others."[17] She also noted that individuals with Asperger's may look well adapted outwardly but still do not have a "normally functioning theory of mind."[18] Digby Tantum believed that better social outcomes were a result of an individual's ability to reduce outward symptoms, which in turn was dependent on the environment within which the person was raised.[19]

Because of the increased media attention concerning autism and Asperger's syndrome, more parents who suspect something is different about their child are having them tested. Special programs designed to help Asperger's children function more easily in society are readily accessible. This has increased the number of Asperger's individuals functioning relatively well in society, thus enabling society to take advantage of their special talents and abilities. Men with Asperger's syndrome who are of above-average intelligence can frequently be found in engineering, science, and other mathematically related fields. Bill Gates is one of the most successful people in the public eye who also happens to be on the autistic spectrum. His insights and skill with computers have impacted society as a whole. Temple Grandin is one of the better-known autistic individuals who champion on behalf of those on the autistic spectrum. She earned a doctorate in animal science and developed a more humane way for slaughtering animals based on her own experiences with touch and fear. Many other well-known scientists, such as Einstein, Newton, and Darwin have been diagnosed with Asperger's syndrome posthumously. Before we return to the world of finance, two fictional scientists also deserve a mention here—Mister Spock and Data from the television series *Star Trek* are undoubtedly part of the Asperger's world.

The Men and Women behind the Machines: ASD and Asperger's on Wall Street

The number of high-functioning autistic spectrum individuals employed by Wall Street firms increased initially due to Wall Street's quest to further increase returns. As noted earlier, less empathic and emotionally unattached traders tend to perform better than those who have some emotional stake in the trading process. However, beginning in the 1980s and continuing through the 1990s and early 2000s, more people working for Wall Street firms were hired for their abilities to model and program highly complex relationships. These recruits came from highly quantitative fields, such as physics and mathematics. An article appeared May 22, 2013, on the *BBC News* stating that SAP, a German software company, was actively seeking individuals who were autistic. The company was quoted as saying, "[P]roductivity has increased as a result . . . and now plans to take on more staff."[20] Taking advantage of this explicit interest expressed by more companies worldwide in finding high-functioning autistic individuals is the Danish company Specialisterne, run by Thorkil Sonne. His firm specializes in finding employment specifically for individuals with autistic disorders. It is responsible for the placement of many high-functioning autistic individuals in computer- and technology-related companies in particular. As noted earlier, autistic spectrum individuals can have great difficulty with their social skills, so finding an intermediary to help obtain employment opportunities is critical. Many corporate recruiters have difficulty seeing beyond the egotistical bluntness described by Asperger, passing over some well-qualified individuals. Thus, the Danish recruiting firm is providing a useful intermediary service, linking companies with well-qualified potential employees who are not able to present themselves in the same positive light as an equally qualified neurotypical person.

Mathematically based subjects are particularly attractive to high-functioning spectrum individuals, as those fields fit well with their ability to focus on a specific area of interest and to creatively solve problems. The fact that SAP announced their recruiting plans to target such individuals gives credence to this. Investment banking houses are not as publicly forthcoming with the qualities they seek in potential employees. But, in hindsight, we can see that the individuals hired by the investment banking houses were primarily mathematicians and physicists. Not all of them were neurotypical and many were on the autistic spectrum. They brought their equations to the world of finance and were instrumental in

the development of trading algorithms. These algorithms make rational decisions by initially looking for patterns in the flow of numerical information that become apparent and which subsequently can be exploited for profit. To underscore how important these algorithms have become, savvy mathematicians and computer programmers developed predator algorithms to prey on the original algorithms of competitors. So rather than watching market indicators and movements, these newer algorithms responded to the behavior of existing algorithms. This has overtones of psychopathic behavioral traits, as we shall see in the next chapter.

For a flavor of how the culture of trading has changed, Michael Lewis' 1989 description of the bond-trading group under John Meriwether captured the essence. According to Lewis, it consisted of

> boys [who] ranged in age from twenty-five to thirty-two . . . Most of them had Ph.D.'s in math, economics, and/or physics . . . Once they got onto Meriwether's trading desk . . . they forgot they were supposed to be detached intellectuals . . . They became obsessed by the game of Liar's Poker . . . [and] took it to a new level of seriousness.[21]

However innovative these young men may have been, they fundamentally changed the game due to their single-mindedness to make a better trading model. There became a total disconnection from the underlying companies or an economic reason for the existence of the financial markets—a disconnection that has had resounding implications for the entire world.

Combining numbers-oriented people with individuals who have an underlying need to accumulate more money has exacerbated the disconnection. One part of the equation would enjoy the numbers and math, pushing the boundaries further away from economic reality. Meanwhile, the other side of the equation would encourage this, fulfilling their own need to obtain more money by employing strategies more akin to gambling than to supporting businesses and the overall economy. While both parties may derive narcissistic gratification from successes achieved due to this arrangement, it becomes dangerous when one side has psychopathic tendencies. Within this dynamic, it is possible to understand how an unconscionable financial colleague or manager can manipulate an unsuspecting high-functioning autistic spectrum colleague; with neither empathically connected to the individuals who will be affected by their actions, each works under different assumptions toward achieving vastly divergent internal rewards. The difference between the two, however, is

that if the high-functioning autistic spectrum individual understands that a third party is being hurt, he or she will experience a conscience or moral reaction to the situation and may change their actions, whereas the psychopath will feel no remorse and continue for as long as he or she benefits.

Evolutionary Finance Revisited

In his keynote address to the Financial Management Association International annual meeting in 2011, Nobel Prize laureate Myron Scholes stated that people in finance are like hunters, always looking for where the meat is. This statement harkens to the biological evolution of humans—despite our civilized demeanor, humans still are on the hunt, acting as predators. Research on foxes in Russia has shown that specific traits can be bred to be more or less dominant over a period of seven generations.[22] The argument could be made that those individuals who like to prey on people have been genetically destined for this fate due to the mating choices of their ancestors. As we will discover in chapter 6, genetic heredity can account for up to 50 percent of behavioral traits, so this proposition is not as far-fetched as it might appear at first glance.

One distinguishing feature of the psychopath is a predatory nature, which will be discussed in more depth in the following chapter. With the information we have thus far, it is possible to grasp how financial psychopaths could be cast as predators preying on individuals who are purposefully targeted for financial annihilation. Financial scammers in particular are preying on anyone who will take the bait offered, but does this action alone make them psychopaths?[23] Some financial traders would undoubtedly consider themselves as battling peer adversaries, rather than preying on weaker players in the market. Those traders who do specialize in targeting weaker market participants may be in a different psychological category and/or may be playing an integral part in ensuring the functioning of Andrew Lo's evolutionary biology-based Adaptive Markets Hypothesis discussed earlier. If, indeed, there are financial psychopaths within the investment banking community, then they are master predators, able to keep their identity hidden as they pursue their prey.

Erik D. Goodwyn, citing various works by Buss, made the argument that humans are essentially hard-wired to respond to threats that would affect either our reputation or social status due to the progression of biological evolution. Men in particular respond aggressively to potential

threats to their social status.[24] The 2011 study by St. Gallen researchers described in chapter 3, in which traders were found to engage in more aggressive behaviors than known psychopaths performing the same task, reinforces the idea that financial market traders go after people whom they perceive might threaten their position in the pecking order. Throughout the history of mankind, preying on others has been a fundamental attribute for survival. Similar to David Livingstone Smith, Goodwyn also noted the division of groupings of people into "us" and "them," which again provides a foundation for hurting others without remorse.

Most people are not willing to admit that they prey on others in any context. David Livingstone Smith has also made the argument that there is an evolutionary biological need for self-deception in order to survive. He reported that people are not conscious of their lying to others, because if they were, they would not be adept liars, which would put their survival at jeopardy.[25] When sociologists have interviewed white-collar criminals about their motivation for their financial wrongdoings, many of the convicted said they had done nothing dishonest.[26] They sincerely believed their innocence, placing the blame on the system or on other people not understanding what they were doing, or claiming that they had no idea what employees in their charge were doing. It is instructive to watch Jeffrey Skilling, the former CEO of Enron Corporation, give testimony.[27] He conveyed the impression that he did not believe he was to blame for the downfall of the company. Self-deception is a major defense mechanism employed by white-collar criminals, because it helps to keep their self-image as upstanding citizens intact.

Is deluding oneself about one's actions a sign of financial psychopathy, or are there other guideposts to differentiate among the various harmful behaviors exhibited by financial professionals? In the upcoming chapter, we will delve into the clinical world of psychopathy and the many exciting new discoveries of how the brain functions, affecting our behaviors.

6

Identifying Psychopaths

With some understanding of the universe within which finance is conducted and the circumstances under which financial professionals work, it will be possible to better differentiate the psychopathology of the individual from the environment in which he or she functions. If we are to unmask financial psychopaths, we must ascertain whether the person themselves is psychopathic or whether the environment in which he or she works expects them to engage in psychopathic behaviors. Psychiatrist Robert I. Simon observed, "[I]f one wants to study psychopaths, one should go to Wall Street. Sometimes it is hard to tell the successful person from the psychopath."[1] People familiar with the book by Bret Easton Ellis, *American Psycho,* or the subsequent film bearing the same name, may envision a financial psychopath to be akin to the main character, Patrick Bateman. Set in the 1980s, the storyline revolves around the life of Patrick Bateman, an investment banker in New York City. Besides possessing all the normal cultural attributes found within the investment banking world that we have already alluded to in chapter 3, Bateman also has a penchant for killing people in a style that people might identify as psychotic or psychopathic. Is the character of Bateman a model for a financial psychopath, or is he a psychotic or psychopathic person, who also works in the financial world?

It is important to establish the distinction between the two, as the mode of responding in a given situation would be different. A violent person who enjoys killing and who also works in finance will seek out individuals to abuse and murder, and not necessarily use their financial skills to harm people. By contrast, the financial psychopath will use the tools of his or her trade, computers and financial transactions, to purposefully damage others. In doing so, he or she will inflict more indirect harm to a greater proportion of the population without resorting

to violence whereas the typical psychopath's actions are more localized. The financial psychopath does not have to have a relationship with the victims, nor does there have to be any personal contact. It can be totally detached, with no bodily violence involved and no blood spilled.

All societies have differing ideals of normal and abnormal behavior, yet certain abnormal behaviors, such as those displayed by psychopathic individuals, are clearly labeled as being outside the limits of acceptable behaviors in all cultures. Certain subunits within a society may value various psychopathic traits, viewing them as useful for accomplishing goals. A recent book by a British psychologist, Kevin Dutton at Oxford University, focuses on the various traits of psychopaths and frames them in a positive light, showing how beneficial these traits can be within specific contexts.[2] In the military, spies and snipers often perform what many would consider unconscionable acts on behalf of the greater society. He also suggests St. Paul could have been a psychopath, with his demonstrated skills as a master manipulator. But taken as a whole, societies generally consider psychopaths as inherently destructive to a community.

Anthropologist Jane. M. Murphy relates how some peoples in the Arctic North deal with psychopaths within their culture.[3] The men of the village take the psychopathic member on a hunting expedition and push him off an ice floe into the freezing waters. It is considered the best outcome for all members of the village. Clearly this is not a legally acceptable way of dealing with psychopaths in the Anglo-American culture, but the point remains that psychopaths and how they are tolerated and dealt with in a given society are defined by cultural context.

Diagnosing Psychopathic Personalities

Possible Imposters

The next step in the search for financial psychopaths is to investigate exactly how clinical psychology and psychiatry identify psychopaths. As with any clinical diagnosis of psychopathology, care needs to be taken to ensure that a person is not inadvertently misdiagnosed. Similar behaviors that are present in different psychopathologies can cause potential problems in diagnosis and treatment plans. There are several other diagnoses that need to be considered before conclusively diagnosing someone as psychopathic. A person who displays psychopathic features while under the influence of alcohol or drugs is not necessarily a psychopath. The same holds true for people with schizophrenia and bipolar

disorders. Likewise, someone who comes from an economically deprived background and holds up a liquor store to get money to feed his family because he can think of no other way to get money is not necessarily psychopathic. Although the action of killing an innocent person is the same, the motivation and brain functioning driving the behavior is different. Borderline, histrionic, and narcissistic personality structures all have behavioral features that could be misinterpreted as psychopathic, so care must be taken to first rule out these potentially less dangerous possibilities.

It should be mentioned that new research related to narcissism suggesting that the possibility exists of a more aggressive and antisocial subcategory,[4] which may help in further refining the differences between psychopathic narcissistic tendencies and narcissists who have psychopathic features. Clinically speaking, a person who is pathologically narcissistic requires a different treatment plan than the person who is truly psychopathic and displays narcissistic behaviors as part of their behavioral repertoire. This can be clearly seen from the effects of Elliott Barker's psychological research study of psychopaths.

Jon Ronson, in his best-selling book *The Psychopath Test* described Barker's research over a ten-year period from the mid-1960s to the mid-1970s at the Oak Ridge Hospital for the Criminally Insane in Ontario, Canada. In an unconventional treatment program he had devised, Barker, a psychiatrist, encouraged psychopathic inmates to get more in touch with their feelings. Marnie L. Rice and coauthors followed up on the effects of Barker's study and discovered that the recidivism rate for these inmates was 80 percent, compared to 60 percent for the general criminal psychopathic population.[5] The results clearly show that the psychopaths who spent therapeutic time learning to identify different feeling states were far more likely to return to prison after their release. By contrast, non-psychopathic inmates who engaged in therapy exhibited recidivism rates well below 60 percent. What was designed as a well-intended intervention for psychopaths had the reverse effect. Barker's psychopathic inmates used what they had learned in therapy to become better at luring victims and committing more heinous crimes once released from prison. This revelation stresses the importance in being able to differentiate between true financial psychopaths and those who mimic psychopathic behavior.

One further possible differential diagnosis not included in the *DSM-V* or *Psychoanalytic Diagnosis* is a person who is on the autistic spectrum with no language or intellectual impairment, or someone with

Asperger's syndrome. Under certain circumstances, a high-functioning autistic spectrum person could be confused with a passive psychopathic personality, given the inability of people with this personality and brain structure to empathize, along with the tendency to be highly narcissistic. Studies using MRI techniques have looked at the interaction of autism and psychopathy, concluding that they are distinct disorders.[6] This is important to consider when trying to identify financial psychopaths, particularly with the increased hiring of high-functioning autistic spectrum individuals in the technology-related sectors of finance.

Psychiatric Diagnostic Criteria

Determining who is truly psychopathic is a difficult task with multiple behavioral nuances and motivations that need to be taken into consideration when making the diagnosis. All mental health practitioners use the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM)* for psychiatric diagnosis. The fifth and most recent edition was released in early 2013 and contains some notable changes, one of which is offering an alternative diagnostic paradigm. As in earlier editions, the manual does not have a separate listing for psychopaths, but rather groups the condition under the broader classification of Antisocial Personality Disorder (APD). According to the *DSM-V*, an upper limit of approximately 3 percent of the general population is estimated to fall under the classification of Antisocial Personality Disorder, with the rate increasing for specific population subsets. The *DSM-V* notes that besides males who abuse alcohol and other mind-altering substances or are in prison, additional groups with disproportionately high APD rates tend to be in low socioeconomic groups or related to immigrant status.

Antisocial Personality Disorder is a broad category and cannot be diagnosed before the age of 18, as one of the criteria requires the persistent display of problematic behaviors before the age of 15. This pervasive pattern of behavior continues into adult life and hinges around the individual's lack of regard for other people and other sentient beings. Of the seven criteria that are included as possible behavioral characteristics, a minimum of three is required for the diagnosis of Antisocial Personality Disorder. The primary features include the following: failure to conform to social norms with respect to lawful behaviors, deceitfulness, impulsivity, irritability and aggressiveness, reckless disregard for safety of self or others, consistent irresponsibility, and lack of remorse.[7] It is

this last feature that helps to clearly differentiate the psychopath. As can be seen from the criteria, Antisocial Personality Disorder and its derivatives (sociopathy and psychopathy) represent a lifelong way of being and not simply a behavioral style that develops in adult life. The expected prognosis for a person diagnosed with Antisocial Personality Disorder is a lessening of the behavioral traits, particularly with regard to criminal activity after the age of 40.

Robert I. Simon, a forensic psychiatrist, described psychopaths as "people who have severe antisocial impulses. They act on them without regard for the inevitable and devastating consequences . . . [T]hey are the predators among us, chronic parasites and exploiters of the people around them." Continuing further, he stated that psychopaths "are unable to put themselves in other people's shoes, any more than a snake can feel empathy for its prey."[8] In other words, psychopaths are focused on themselves without regard for others. This excessive emphasis on oneself is also a feature of Narcissistic Personality Disorder and a component of Asperger's syndrome, discussed in the previous chapter.

One feature of psychopaths that strikes non-clinicians and clinicians alike is how charming they can be. This makes any subsequent bad behavior seem totally incongruous and out of character—a feature that is disconcerting when attempting to reconcile the person who is known to be charming with the reprehensible act they carried out. The dissonance can be overwhelming, which in turn can cause people to dismiss the alleged act as not possibly being carried out by such a nice person. A case in point is the experience of Diane Henriques, a noted financial issues author, who spent time interviewing Bernie Madoff in prison for a book she published about the massive Ponzi scheme he pulled off for decades.[9] She too was struck by his charm, despite knowing what he had done.

It is easy to dismiss the power of charm that psychopaths possess if one has not knowingly interacted with a psychopath. Masterful psychopaths do not have signs above their heads indicating that they are being nice to you in order to get something from you. Early in my clinical training as a psychoanalyst, I participated in the twice-daily group psychotherapy sessions at a psychiatric unit of a hospital. I learned quickly that men in general were less forthcoming about their feelings than women. Most preferred to sit back and not talk if given a choice. One day a young man who came with a psychopathic diagnosis joined the unit. He was pleasant with everyone in the psychiatric unit, and it was difficult to believe he was the violent psychopath described in his chart. At the group psychotherapy sessions, he was attentive to the women in the group, seemingly

empathizing with their various predicaments. Then, at some point, the realization spread over me that he was sizing up his fellow inpatients, much as a predator animal will determine which animal in a herd is the weakest. I could feel the hairs on the back of my neck stand up as I finally understood how dangerous this young man could be, despite his ostensibly charming demeanor. Within days of my realization, the psychopathic inpatient attempted to harm one of the women during the night. Fortunately, he was stopped and taken to a more secure environment. That one episode was enough to teach me how deceptive appearances can be.

Going Beyond the DSM-V

Hervey Cleckley, the psychiatrist who wrote *Mask of Sanity* in the 1940s, was instrumental in defining psychopathic behavior. Canadian psychologist Robert D. Hare, who developed the Hare Psychopathy Checklist (PCL) as a result of his work with prisoners, expanded Cleckley's work. Various versions of the PCL are currently in use worldwide to diagnose psychopaths and are considered the gold standard in testing instruments for this disorder. In a discussion with Oxford University psychologist Kevin Dutton, Hare is quoted as saying, "I've always maintained that if I wasn't studying psychopaths in prison, I'd do so at the stock exchange."[10] Hare has since partnered with management-oriented psychologist Paul Babiak and together they have further refined the PCL for application in business settings. This business-specific psychopathy test, known as the Business-Scan 360 (B-Scan 360), is used to identify people Hare and Babiak label as "corporate psychopaths." Although the B-Scan 360 is currently not available for commercial use, businesses have been participating in research studies to help validate the instrument. According to Babiak's website, it is used for "employee selection and succession planning."[11]

Babiak and Hare distinguish between psychopaths, sociopaths, and Antisocial Personality Disorder in their book *Snakes in Suits*, estimating the rate of incidence of psychopaths in the general population to be 1 percent.[12] Given this low incidence of occurrence, the determination to be able to identify such individuals seems out of proportion. However, psychopaths in all cultures are considered to be responsible for a disproportionate amount of mayhem and thus deemed to be detrimental to society as a whole.

The primary features of psychopaths as delineated by Babiak and Hare are lack of conscience, incapacity for empathy, lack of guilt or remorse,

deceitfulness, and loyalty only to themselves. Correlating these traits with those from the *DSM-V* for Antisocial Personality Disorder, they map very closely with the exception of the more violently oriented criteria. According to Babiak and Hare, sociopaths, in contrast to psychopaths, have a "sense of right and wrong based on the norms and expectations of their subculture or group."[13] This is not a clinical diagnosis but describes "patterns of attitudes and behaviors that are considered antisocial and criminal by society at large."[14]

A distinction made by people who work extensively with psychopaths is whether they are aggressive or passive.[15] According to Simon, passive psychopaths "tend to be parasitic and exploitative of others . . . have frequent scrapes with the law but usually manage to squirm out of serious trouble and punishment."[16] People in this category commit primarily white-collar crimes, which would make business and finance optimal professions to target. Anyone who has kept track of the indictments handed down to those involved with the financial crisis are aware of the lack of financial professionals successfully prosecuted. Those who have been convicted are primarily at the low end of the organizational hierarchy, not the executives who manage to escape regulatory punishments. Aggressive psychopaths commit more violent crimes, such as murder, and so if caught can be found populating prisons. Interestingly, Robert D. Hare found that psychopathic activity, particularly for those individuals who commit less violent crimes, drops dramatically after the age of 40.[17]

Predominance of Men

As mentioned in the *DSM-V,* the vast majority of people diagnosed with Antisocial Personality Disorder are men. Hare's validated and widely accepted Psychopathy Checklist was developed using male prisoners. As men make up the preponderance of managers and executives on Wall Street, it may seem irrelevant to consider the role of female psychopaths and their financial counterparts. However, this would be a mistake, as those women who do succeed in the environs of Wall Street may have traits that are just as potentially deadly as the ones possessed by men who are financial psychopaths. Being below the radar offers these women different opportunities and strategies to achieve a desired outcome.

A number of researchers have been exploring the differences between psychopathic men and women.[18] The lack of information about female

psychopaths is echoed by all researchers, which may be attributed in part to slightly different defining characteristics, making female psychopaths difficult to diagnose with the current criteria. Psychologists Mette Kreis and David J. Cooke delineated the similarities between male and female psychopaths in their case study of two female psychopaths. They noted that both groups are "interpersonally detached, self-centered, self-justifying, domineering and extremely manipulative and deceitful."[19]

The most noticeable contrast between the genders is the incidence of less physical violence, with females preferring to use more relationally oriented techniques to abuse their victims.[20] This preference for using personal relationships was also observed by psychologists Elham Forouzan and David J. Cooke in a study in which they found that women are more likely to manipulate by flirting, whereas men use their manipulative tendencies in the financial realm—with the focus on scams and frauds.[21] This does not imply that female psychopaths are impervious to money; rather they tend to be more promiscuous, using their sexuality to obtain wealth through social relationships.[22] If they do engage in overt criminal activities, the lesser crimes of theft and fraud are more common.[23]

Psychoanalytic Perspective and Attachment Theory

From a psychoanalytic perspective, Nancy McWilliams noted, "The psychopathic continuum loads heavily in the borderline-to-psychotic direction, because conceptually, the diagnosis refers to a basic failure of human attachment and a reliance on very primitive defenses."[24] Thus, psychoanalytic diagnosis seeks to discover the root causes of the behavioral symptoms—in this case no connection to others and methods of coping that do not call on more developed strategies. McWilliams commented, "Even if they are aware of them, psychopathic people cannot acknowledge ordinary emotions because they associate them with weakness and vulnerability."[25] She contrasted this inability to connect with emotion to the person who was raised with an overindulgent parenting style and acts in an entitled manner. In the latter situation, the person has some ability to connect to others, which McWilliams noted might be played out with antisocial tendencies due to an entitled attitude, often accompanied by lack of boundaries. The story given in an earlier chapter of young people from an above-average socioeconomic group who held a party and trashed a neighbor's home while he was away is an illustration of McWilliams' observation.

The field of human attachment theory has grown as society has changed in terms of how children are reared and the increased role of electronic technology in all aspects of life, including relationships. Studies have shown that children who have disorganized attachments to early caregivers are at much higher risk for aggressive, impulsive, and other socially problematic conduct throughout their lives.[26] Behaviorally, the distinction between psychopaths and people with attachment disorders was described clearly by Martha Stout: "Children and adults afflicted with attachment disorders are seldom charming or inter-personally clever. On the contrary, these unfortunate individuals are typically somewhat off-putting, nor do they make any great efforts to 'fake' being normal."[27] Given that psychopathic personalities are usually perceived as charming, this is a useful observation to bear in mind.

Concerns are being raised about how the lack of early human attachment plays out in later years in individuals' lives and the corresponding impact on society. Surprisingly, technology has shed more light on distinguishing psychopaths from others in the general population. The use of magnetic resonance imaging (MRI) scans and the subsequent mapping of brain functions to specific areas of the brain have made tremendous advances in understanding how the psychopathic individual differs from a neurotypical individual. It is now possible to pinpoint what is different about the psychopathic brain, which results in observed behavior patterns. Researchers have found the emotions elicited by attachment originate primarily in the brain.[28] Lack of attachment, one of the hallmarks of psychopathic diagnosis, may be attributed to brain physiology rather than simply the result of poor initial human bonding with parental figures. Attachment theory is connected to the research on empathy and morality, which provide more clues into the neurological makeup of a psychopath. Brain scan data from functional MRIs shows that the center in the brain responsible for empathy does not light up in the brains of psychopaths.[29]

Further Neurological Findings

Neuroeconomists, in particular, employ the use of functional MRIs to see what happens inside the brain when research participants are given tasks to complete that involve money. One such study that employed games with monetary rewards was designed by Michael Koenigs, Michael Kruepke, and Joseph P. Newman to distinguish between high- and low-anxiety

psychopaths. They concluded that low-anxiety psychopaths (also known as primary psychopaths) are neurologically different from high-anxiety psychopaths (secondary psychopaths). The latter respond to tasks that involve money in a manner similar to non-psychopaths, suggesting that other factors, such as environment, may play a role in the origin of psychopathic behaviors.[30] Koenigs et al.'s findings are of particular interest in our search for financial psychopaths, as it may be inferred that it is possible to have a non-psychopathic financial professional who has been influenced by his or her environment to act in a psychopathic manner.

Another recent study by Julian C. Motzkin, Joseph P. Newman, Kent A. Kiehl, and Michael Koenigs confirmed that the ventromedial prefrontal cortex (which controls emotions such as empathy and guilt) does not communicate properly with the amygdala (responsible for fear and anxiety) in psychopaths.[31] From a neurophysiologic perspective, empathic ability is related to mirror neurons in the motor cortex. Mirror neurons are responsible for helping people learn from observing other people. Robert I. Simon suggested a weak mirror neuron response, inferring fewer mirror neurons, may have a role in shaping the psychopathic personality.[32] This lack of mirror neurons and communication misfiring between the ventromedial prefrontal cortex and amygdala helps explain why psychopaths in the Oak Ridge experiment did not respond to therapy in the expected manner.

Andrea Glenn and her coauthors found that increased activity in the prefrontal cortex (the region of the brain that provides cognitive control to offset emotional responses to moral dilemmas) increases in psychopaths when making emotional moral decisions. This activity is positively associated to "impulsive lifestyle" and "antisocial" factors of psychopathy. One possible implication of their findings is that there is "a failure to link moral judgment to behavior with appropriately motiving emotions."[33]

Genetics and Psychopathology

A variety of studies designed to find physiological or biological traits to identify psychopathic individuals more precisely have emerged as technology has improved. In her book *The Sociopath Next Door,* Martha Stout cited a longitudinal study that looked at the genetics behind psychopathic traits.[34] The findings showed eight of the traits to have genetic components. She also quoted results from the Texas Adoption Project, which looked at psychopathic deviation among adopted children. In this case

the heritability estimate is high—54 percent. Other studies find heritability estimates in the 35 to 50 percent range of personality characteristics. Thus, the genetic component for psychopathy is currently recognized as being somewhere between a third and a half, with the remaining proportion being attributed to environmental or other causes.

Epigenetics, the study of genetics and environment, has shown that genes contain coded information and also a switch or promoter. Cues in the cell itself as well as the outer environment activate the promoter and hence the information in the gene, causing it to switch on. Thus, if someone has a high genetic propensity toward psychopathy, whether it becomes prominent depends on internal and external environmental cues.[35] Because these are not one-time switches, such a person could theoretically not become psychopathically "activated" until placed in an appropriate environment that elicits and rewards psychopathic behavior. This calls into question the premise in the *DSM-V* that antisocial behaviors have to have been displayed before the age of 15 in order to give a diagnosis of Antisocial Personality Disorder. People normally do not begin working in professional finance roles until they are over the age of 21, so if it is the environment of finance that promotes latent psychopathic tendencies, the genetic switch will not be turned on until their career begins.

Additional studies that attempt to more precisely detect psychopathy in individuals have focused on a linguistic component. S. Williamson, T. J. Harpur, and Robert D. Hare showed that people diagnosed as psychopathic did not react the same way to emotionally charged words, as did more neurotypical people.[36] Emotionally charged words, such as *love, mother,* or *death,* elicited the same physiological response in psychopaths as words that were considered neutral, such as the word *paper*. By contrast, people who were not psychopathic showed larger brain responses and faster decisions to emotionally laden words than to neutral words.

Hare's research on the brains of psychopaths revealed that the amygdala functions differently than the brains of non-psychopaths. Specifically, psychopaths did not sweat in anticipation of receiving a strong electric shock; when the tests were repeated, they still didn't respond in fear. Further research by Hare indicated that psychopaths were absorbed by graphic photographs of violence and did not react when a loud sound went off in their ear. He commented that these responses show "dissociation between the linguistic meaning of words and the emotional connotations . . . Various parts of the limbic system just don't light up."[37] Babiak and Hare noted that language-processing centers in the brain are

activated by emotional events, indicating that the response of psychopaths is more cognitive than emotional.[38]

A study conducted by James Blair, chief of the Unit on Affective Cognitive Neuroscience at the National Institutes of Health, concluded that the cognitive neuroscience-based integrated emotional system (IES) model is suggestive of both a primary amygdala and a ventrolateral frontal cortex dysfunction in psychopathic individuals.[39] The primary amygdala is linked to the ability to "form stimulus-reinforcement associations, [which] interferes with socialization," whereas the ventrolateral frontal cortex is "associated with an increased risk for frustration-based reactive aggression."[40] He also considered why these two dysfunctions exist. An exogenous factor may be lifestyle-related—some forms of drug use have been associated with dysfunction in the orbital/ventrolateral frontal cortex.[41] As noted earlier, the use of drugs by psychopaths is significantly higher than for the general population, and, likewise, the use of drugs and alcohol is also prevalent within the Wall Street financial universe.

Corporate Psychopaths

The omission of Wall Street financiers from the *DSM-V* is hardly surprising until one considers the quote at the beginning of this chapter by psychiatrist Robert Simon, in which he suggests Wall Street is a fertile ground for studying psychopaths, a sentiment echoed by the psychopath expert Robert Hare. Caution needs to be exercised when entertaining the idea that financial psychopaths should be included as a diagnostic category, as the *DSM-V* states clearly that "criminal behavior undertaken for gain that is not accompanied by the personality features characteristic of this disorder" does not represent sufficient grounds for making this particular diagnosis.[42] The traits must be "inflexible, maladaptive, persistent and cause significant functional impairment or subjective distress"[43] in order to consider including individuals who have engaged in financially motivated criminal behaviors as deserving of the antisocial personality designation.

The case of James "Whitey" Bulger, a Boston mobster, is worth reflecting on in this regard. At his sentencing on November 14, 2013, he received the maximum possible of two life sentences plus five years for a series of murders and other crimes carried out over several decades. He received the maximum sentence, in part because of the monetary gain accompanying the murders, which the judge deemed to make his crimes "all the more heinous, because they are all about money."[44] Defiant all the way

through the trial process, Bulger showed no remorse and deemed the proceedings to be a "sham."[45] Bulger appears to meet the general *DSM-V* criteria for Antisocial Personality Disorder, with his foray into crime starting before the age of 15. His financially related criminal behaviors are not sufficient, but his persistent psychological traits that are maladaptive give enough basis for the diagnosis. Because Bulger is viewed first as a criminal, his various business enterprises do not fall under the normal designation of a business or corporation. But in practice, he ran a big corporation with multiple interests in related industries: drug dealing, gambling, money laundering. This did not go unnoticed by prosecutors, as he was also charged with "federal racketeering for running a criminal enterprise from 1972 to 2000."[46] So given Bulger's "corporate" interests, should he be classified as a corporate psychopath, or do his criminal activities, which include violence, abuse, and murder beginning at a young age call for the more traditional classification of psychopath?

With the increased ability to distinguish psychopathic individuals not based solely on behavioral characteristics, identifying them in nonviolent situations and settings other than prisons has become more prevalent. As far back as 1941, Hervey Cleckley stated that psychopaths are not just found in criminal settings. Researchers are aware that psychopaths populate the spectrum of well-educated and highly regarded professions, including doctors, lawyers, and businesspeople. Political and governmental positions are also potentially attractive career choices for psychopathically inclined personalities.[47] To be successful in business and political situations, leadership skills often require a person to develop a certain style when presenting himself or herself to the world. Many of these behaviors match psychopathic traits. The outer behavioral presentation or persona of a businessperson may or may not accurately reflect the business leader's true inner personality. The problem for outsiders is to know who the "real" psychopath is, as he or she will inherently be more dangerous and cause greater damage in the long term.

According to Robert D. Hare, what makes white-collar crime so appealing to psychopathic personalities is the array of high-payoff opportunities with limited downsides if caught.[48] These opportunities often make full use of the "talents" of the psychopathic individual, enabling them to be successful. Hare noted that occupations that are more likely to attract the psychopathic personality are those in which "requisite skills are easy to fake, the jargon is easy to learn, and the credentials are unlikely to be thoroughly checked" and "[i]f the profession also places a high premium on the ability to persuade or manipulate others."[49] These criteria

easily fit the descriptions of many positions available on Wall Street and its affiliates. Clive Boddy focused on the incidence of psychopathy among Australian managers and discovered more in financial service companies and the civil service than would be expected in the general population.[50] He attributed this to the need of corporate psychopaths for money, power, and prestige.

A prime example of a financial psychopathic individual who was eventually caught in 1987 after defrauding banks of $23.5 million is John Grambling, Jr. As Robert Hare commented in his book *Without Conscience,* this case "is a model for using education and social connections to separate people and institutions from their money without using violence." He continued, "[T]he deceit and manipulation of these individuals are not confined to simply making money; these qualities pervade their dealing with everyone . . . including family, friends, and the justice system."[51] The financial damage inflicted by Grambling was extensive, yet the punishment meted out was light. This is typical of outcomes involving identified corporate psychopaths, especially if they are socially well connected.

Paul Babiak and Robert D. Hare divide corporate psychopaths into three categories: corporate manipulators or cons (more passive), bullies (more aggressive), and puppet masters (who display both manipulative and bullying behaviors).[52] They liken this latter category to the dangerous, violent criminal psychopath. Perhaps this would be the appropriate corporate psychopath designation for Whitey Bulger. Manipulators and bullies both display the same traits as their corresponding criminal psychopathic counterparts.

From Babiak and Hare's own research findings using two hundred high-potential executives, they reported that 3.5 percent or seven of the executives fit the psychopathic profile using the short version of the PCL. They noted that only two of the two hundred executives fell in the bully category, and none in the puppet master category. Out of a population of two hundred, 4.5 percent or nine people were psychopathic, making the incidence rate much higher than the 1 percent for the general population. The majority of these corporate psychopaths tend toward passive manipulative psychopathy, which from earlier research would indicate they would be more likely to get into minor scrapes with the legal system and receive little or no punishment for their offenses.

One well-known former CEO, Al Dunlap, whose reputation for laying off employees to make operations more efficient while still making millions for himself earned him the nickname of Chainsaw Al,

was interviewed by Jon Ronson for his book *The Psychopath Test.* With Dunlap's cooperation, they went through Hare's Psychopath Checklist together. Dunlap's overall score was high.[53] What Ronson further discovered was that Dunlap viewed several of the items on Hare's checklist as positive attributes. For example, "lack of remorse frees you up to move forward and achieve more great things" and "[i]mpulsivity was just another way of saying Quick Analysis."[54] Years before being interviewed by Ronson, Dunlap was accused by the SEC of engaging in fraudulent accounting practices at Sunbeam Corporation from 1996 to 1998. The following year, the case was settled, with Dunlap neither admitting nor denying guilt. He was permanently barred from office at any public company and paid a civil penalty of $500,000.[55]

Belinda Board and Katarina Fritzon administered the Minnesota Multiphasic Personality Inventory Scales for *DSM-III* personality disorders to 39 British senior business managers and chief executives.[56] They found that this group of business executives displayed significant elements of psychopathic emotional traits while relatively lacking aggressive psychopathic traits. These results concur with those of Babiak and Hare: that corporate psychopaths are primarily of the passive type.

Manipulation in all forms is a common business practice. Does that mean all businesspeople are psychopaths to some degree? Marketing departments specialize in trying to manipulate the behavior of consumers to buy more products they didn't know they wanted or needed. The general public, however, does not want to perceive investment professionals as trying to sell them products they don't need or to manipulate them. Investment professionals are, in the minds of the public at large, supposed to protect the financial well-being of the average person. Investment professionals have a fiduciary duty. Robert I. Simon noted that the motivation for manipulation by the psychopath on Wall Street is different from that of an entrepreneur.[57] The key to differentiating between them is the productivity of the results from manipulating. The entrepreneur wants to keep a business running, whereas the financial psychopath derives gratification from his manipulation and is not concerned about the outcome for others, provided he or she obtains the payoff desired.[58]

Financial Psychopaths

From the preceding discussion, it appears that psychopaths have long been present in the business community, some argue for hundreds of years. So why are more people being identified as financial psychopaths

now? One possible explanation is that during the past 30 years, as researchers have started to focus on the concept of psychopaths outside the violent criminal realm, the financial world has changed. As shown by economists Thomas Philippon and Ariell Reshef, relative wages in finance increased significantly during periods when financial deregulation increased.[59] Throughout the most recent rounds of deregulation, demand was high for individuals who could create and sell financial products to meet the requests of investors looking to get into the next positive abnormal return deal, thereby increasing the number of people hired in the finance industry. Many of the desired traits to achieve these goals, such as aggressiveness to pursue clients, narcissistic confidence, and willingness to stretch the truth or omit relevant information to close the deal, match those possessed by psychopaths. A case in point are the 24-hour call centers set up in Nevada and other states to sell and process vast numbers of mortgage and refinancing applications. People with less than stellar qualifications found quick and easy employment, helping to man these enterprises.

What exactly distinguishes the financial psychopath from the traditional *DSM-V* psychopath or corporate psychopath? Financial psychopaths can be considered a subset of corporate psychopaths, as they too function in the business setting. Violent crime is not usually a feature of their actions. Differentiating further between corporate and financial psychopaths, the focus narrows to those whose primary responsibility is the handling of money belonging to other people, whether directly or indirectly. Trust has been placed in financiers, who are expected to honor this fiduciary responsibility, which is a component of their job. When financial professionals are perceived as violating that trust by not acting prudently on behalf of clients and instead taking care of their own financial needs first, it becomes a cause for concern, if not alarm. In addition, if the financial professional is experienced as unremorseful and callous about the financial outcomes, particularly if the outcomes are negative, then the features of the psychopath have entered the picture. Thus, one way to define a financial psychopath as distinct and separate from the corporate psychopath is as a predator who ruins the lives of others through activities involving financial transactions, is emotionally detached, and shows no remorse, perhaps even taking pleasure in the demise of others. My definition of a financial psychopath also requires meeting the criterion from the *DSM-V* of being a pervasive, lifelong pattern of behavior, as well as meeting a minimum of three of the other general personality traits listed under the diagnostic requirements.

Armed with this new working definition of a financial psychopath, we will examine individuals in the financial realm who have already been identified as damaging others through actions taken in the financial markets. Hindsight will be helpful to recognize the traits displayed by these white-collar financial criminals, as well as to understand the influence of environmental factors on their conduct.

7

Rogues and Psychopaths

From the previous chapters, we have learned there is a statistically significant higher percentage of psychopaths present in the financial industry. The study by researchers at St. Gallen's presented in chapter 3 found that traders were more willing to damage their competitors than a group of known psychopaths. Are traders a more aggressive, less compassionate white-collar version of criminal psychopaths? Thus far, we have examined the traits of psychopaths and the culture of finance, including specific aspects of it. We have traced the evolution of finance education and key theories in finance over the past 20 to 30 years. Now it is time to see if it is possible to discern, with the advantage of hindsight, potential financial psychopaths. For each person selected, a brief synopsis of the crime that brought the person into the public consciousness will be presented, along with a short description of the person's background. We will seek to determine if each person met the criteria for Antisocial Personality Disorder as defined in the *DSM-V*, in addition to meeting Hare's short version for psychopathy. There are inherent dangers and ramifications in any "long-distance" psychological evaluation, and the purpose here is not to diagnose. Rather, this chapter is an attempt to determine whether these individuals could possibly have psychopathic personalities or whether they were influenced by external factors that resulted in behaviors that appear to casual observers to be psychopathic in nature.

Some individuals who have been considered financial psychopaths are well-known even to those not involved with finance. Bernie Madoff became infamous for his extensive Ponzi scheme that lasted for decades. Enron executives Jeffrey Skilling, Kenneth Lay, and Andy Fastow perpetrated their scam by hiding behind the corporate entity. Appearing to act on behalf of shareholders, they were able to drive up the market value

of Enron by manipulating energy prices and how the deals were subsequently reported on the corporate financial statements. In both cases, trust of investors, employees, and markets were abused, wreaking havoc in the system and ruining the lives of untold numbers of people. Others who have conducted shady deals are less well-known by the general public and these are the ones we will investigate.

First we will look for financial psychopaths in the world of investment banking, where trust in financial professionals was profoundly damaged in the financial crisis of 2008. The behavior of each person selected for consideration has resulted in a significantly negative impact on individuals, companies, and society. The first two people who are discussed in this chapter have both made the list of top-five rogue traders of all time, albeit for different reasons. Acting alone and not staying within company guidelines when making changes, rogue traders made headlines, as banks lost increasingly larger sums of money through the unauthorized transactions. Nick Leeson and Jérôme Kerviel were traders at different investment banks over a decade apart, yet both managed to place their respective institutions in precarious financial situations with serious consequences to multiple parties.

I. Nick Leeson

Nick Leeson is the first person we will assess in detail, having been included as an "infamous rogue" in an article about financial psychopaths written by Sherree DeCovny for the *CFA Institute Magazine* in 2012. Leeson is known for bringing down Barings, the renowned, centuries-old British investment bank, in 1995. DeCovny noted, "In published accounts, he was described as an accomplished liar adept at falsifying records and fabricating letters."[1] However, if lying were the only behavior that Leeson displayed, that by itself would not qualify him as a psychopath of any type. Taking an in-depth look at Nick Leeson's life and his behaviors allows us to determine whether he truly fit the criteria of a financial psychopath or whether he was simply a rogue trader.

Background[2]

Nick Leeson was born in 1967 into a working-class family who lived in government-subsidized housing in a town just 17 miles northwest of central London. His father was a self-employed tradesperson frequently

absent from home due to work. Nick's mother was a nurse in a psychiatric hospital. She died when Nick was 20 years old and he helped to raise his three younger siblings after her death. Judith H. Rawnsley, who wrote about Nick Leeson in her book *Total Risk: Nick Leeson and the Fall of Barings Bank,* described him as a quiet, shy, intelligent but not outstanding young man. He married in his early twenties, and the marriage lasted until he went to prison for his crimes at Barings.

Leeson finished his formal schooling at age 18 after performing poorly on his Advanced Level exams. Despite failing the mathematics exam, he was able to land a clerical job in the back office of the private bank Coutts, which dates its origins back to the late 1600s.[3] After World War I, Coutts merged with National Provincial & Union Bank but kept operating as before. By the time Leeson joined Coutts, the bank was functioning as the private banking arm of NatWest, which had been created when Westminster Bank merged with National Provincial in 1969. Thus, Leeson was effectively working for a large international investment bank, with access to the accounts of their most affluent customers.

After two years, he moved to the back office of American investment bank Morgan Stanley. His job involved settling futures and options contracts. While at Morgan Stanley, Leeson realized being a dealer in futures and options would provide him with a substantially higher income than his flat salary. He left Morgan Stanley when an opportunity to engage in derivatives trading presented itself at the merchant bank Barings. Like Coutts, Barings had a long history, dating back to the mid-1700s. However, unlike Coutts, Barings' past activities show that the management culture of the firm promoted taking greater risks in search of profits, which may have been due in part to the American influence in the director ranks. In the 1880s, Barings' involvement with South American government debt resulted in a bailout of the company in 1890 to prevent financial disaster on a global scale,[4] a fact not mentioned in their own information released to the public and archived by the British Library.[5]

As fate would have it, Barings was expanding into the Far East at the time Leeson applied for a position, and they were looking for motivated, aggressive young men to set up their Asian office. Barings' management team was primarily from the elite schools in Britain. They wanted to bring in talent that was driven to make money. Leeson joined them and soon was on the trading floor. He described the job of being a derivatives trader as "akin to a bookie once removed, taking bets on people making bets."[6] At the age of 25, he became the general manager of Barings'

new Singapore operations trading on the SIMEX (Singapore Monetary Exchange), trading futures on the Japanese Nikkei Index. His annual salary was £50,000, with bonuses well below those found on Wall Street. He was also in charge of other young novice traders in a team he had put together himself.

In his capacity as general manager, Leeson was responsible for tracking and reporting all trading activity to London and was given authority to set up new accounts as necessary. Among the accounts Leeson created was a client account that was a façade for an error account. Trading institutions use error accounts to record trades made incorrectly by traders on behalf of clients. The company pays for these mistakes, not the client. Leeson labeled the account 88888—the number 8 represents good luck in Asia. Within days of setting up the account, he excluded it from all reports to the home office, and it remained only in a margin file in Singapore, which was for his eyes only. The insinuation from Leeson's behavior is that he intended from the outset to use this particular account for illicit purposes. He, however, contends that he created it to cover a bad trade of £20,000 (a relatively trivial amount by trading standards), made by one of his novice traders. At this juncture, it should be made clear that from a risk management perspective, allowing one person to trade as well as balance the books for their own trading is not wise: it gives that person a tremendous amount of leeway to commit fraud. Leeson took advantage of the weaknesses in Barings' system of oversight, which was poorly devised and managed.

Leeson decided to enter a fictitious trade into the 88888 account with an offsetting fictitious trade in a real account to cover potential problems. This left him with an actual exposure that necessitated meeting cash margin calls. These calls required Leeson to have enough cash on a daily basis to meet the shortfall if the price moved against him. He was betting at this point that he could predict the movement of the Japanese market and make good on positions, as well as come up with the cash he needed to keep the contracts from being called. Initially, Leeson was able to cover the calls and could have closed the 88888 account without anyone being the wiser. Instead, according to Judith Rawnsley, who also worked at Barings, he continued using the account to "creat[e] false journal entries, fabricat[e] transactions and writ[e] options."[7] Losses were posted to the 88888 account, while profits were recorded in the legitimate accounts. Leeson was not able to hedge his open positions, as that would reveal his lie to the market. He was forced to remain

exposed, which was a risky stance in a market that had become increasing volatile.

According to Leeson's own recounting, the 88888 account contained losses in the millions by the end of 1994. He placed large bets on the Nikkei rising in an attempt to bring down the size of the account. When the Kobe earthquake hit in January 1995, the Nikkei plummeted, and Leeson's strategy was no longer viable. He cajoled superiors in London to give him more cash and attempted to move the market by placing large orders to drive demand. But confidence in the Japanese market had dwindled and there were no buyers. Leeson created fake documents using original documents, copy and pasting falsified information, then faxing or scanning in order to delay discovery. Losses in the 88888 account totaled more than £800 million by the time executives in London became aware of the extent of the damage wreaked by Leeson. He had brought down Barings because he was not able to sustain the cash margin calls on unhedged positions on an index that continued to move against him. His need for cash to simply maintain the positions while waiting to sell was almost equal to the capital base of Barings itself. The actual contract amounts (more than US $1.3 billion) far exceeded the total value of the bank. The venerable centuries-old Barings Bank was unable to sustain a loss of this magnitude and was subsequently sold to the Dutch banking and insurance firm ING for £1. Employees lost their jobs, and investors lost their money.

Meanwhile, Leeson fled Singapore with his wife, Lisa, going first to the South Pacific for a week and then back to Europe. Within weeks he was captured on arrival in Frankfurt, Germany, and extradited back to Singapore. His initial sentence was for six and a half years, of which he served approximately four years.

Psychopath?

One of the first criteria that must to be met in diagnosing any antisocial personality disorder is that of problematic behaviors being prevalent before the age of 15. In no account about Leeson was there any indication that he engaged in such behaviors. The *DSM-V* then requires three of seven possible criteria be met, which show "a pervasive pattern of disregard for and violation of the rights of others occurring since age 15."[8] It is difficult to discover that such a pattern existed. While at Barings, Leeson

was deceitful, and he did repeatedly perform acts that are grounds for arrest (for example, fraudulent accounting, which also falls under deceitful), but Leeson cannot be classified as having Antisocial Personality Disorder under the *DSM-V* criteria.

The short version of Hare's Psychopathic Checklist uses four domains, addressing specific traits. The first relates to interpersonal traits and considers whether the person is superficial, grandiose, and/or deceitful. Leeson fits the deceitful feature and displays traits of grandiosity. The biography portion of his website, similar to his book, has many phrases and word choices that suggest he thinks highly of himself and not as much of others. One such example is evident when Leeson quotes from his book that "the ego of a 28-year-old trader . . . and the greed and stupidity of a 233-year-old bank had combined to destroy an investment empire and in the process stunned the world."[9] He describes himself as a whiz kid, despite his A-Level failure in mathematics, and said that the Barings' executives saw him as "infallible," having accounted for 10 percent of the bank's profits in 1993.[10]

Characteristics under Hare's Affective domain (lacks remorse, lacks empathy, doesn't accept responsibility) do not appear to describe Leeson, according to written descriptions of his actions. He was physically ill from the stress of the losses and readily admits to having caused the debacle at Barings. He is fully aware of committing fraud.

The third domain on Hare's checklist is Lifestyle and considers whether the person is impulsive, lacks goals, and is irresponsible. There are multiple instances in which impulsivity and irresponsibility are evident during the Barings episode. For example, Leeson's actions are impulsive when he tries to escape Singapore after crashing Barings. However, that seems to be a survival instinct rather than a way of living. Leeson's penchant for drinking seems to have led to irresponsible behaviors. He described himself as having been "a partying, good-time youngster who could abuse his body with heavy drinking" and again after his release as "enjoy[ing] a fairly hedonistic first year."[11] He also recalled that his first wife supported him after his conviction and imprisonment but later divorced him when she discovered his "infidelity with Geisha girls."[12] Both the drinking and sexual promiscuity have been a part of Wall Street trading culture, so it is difficult to distinguish how much of each behavior is due to cultural adaptation and how much is driven by Leeson's personality. However, when looking at Leeson's attitude toward his lifestyle over a longer period, a pattern emerges of having goals and taking responsibility in general. The final domain on Hare's checklist covers antisocial behavior and does not appear to apply.

Analysis

Summarizing the results from the two different psychiatric evaluative tests, it would appear that Nick Leeson does not fit the criteria for a psychopath. So it would be informative to see if any other factors discussed in previous chapters might have played a role in Nick Leeson's psychopathically perceived behavior.

Nick comes from the United Kingdom, which ranks closely behind the United States in having an individualistic orientation. He lived in close proximity to London, a financial hub, becoming involved in the commercial banking and, subsequently, investment banking sector by the age of 20. Working for Morgan Stanley, an American firm, he became entranced with how to improve his lifestyle and make significantly more money. He essentially bought into the American dream that would provide him with an avenue to escape the class structure inherent in British society. The position at Barings seemed to be a lucky break (another aspect of the American dream), giving him access to the investment banking culture, which he otherwise might not have been able to obtain, given his education and socioeconomic background. His employment by Barings came at a time when the New York investment firms were imprinting their culture on London's financial firms. The concept of hiring someone from Leeson's socioeconomic background simply would not have occurred without this cultural shift. Once hired, Leeson assumed greater risk to be seen as a successful trader, which in the investment banking culture would ensure his continued employment. Losing was not an option.

Another factor that came into play in Leeson's case was his age—from a neurological perspective his brain still was not fully formed, so he had a greater tendency to take more risk than an older person in the same position. He does not appear to be on the autistic spectrum at all, so none of those factors would apply in his situation.

Thus, taking all the evidence together, Nick Leeson's behavior in bringing down Baring's seems to be a case of a young, inexperienced trader who was able to convince older investment bankers that he could do what they wanted. He became caught up in the whole culture of investment banking, including sexual relations with geisha girls while in Japan and heavy drinking. He seemed to be possessed by a compulsion to make money and was unable to stop. This happens to many young people employed in the investment banking industry. Leeson was not an anomaly. He did not have the experience or desire to extricate himself from the situation in which he put himself. Both in his book, *Rogue Trader*, and

on his website, there is an impression that Nick Leeson's personality has a strong narcissistic component. Again, being a successful trader requires having confidence in yourself to play the game, which often stems from a narcissistic proclivity.

Judith Rawnsley suggested that it was Leeson's desire to please, coupled with the fear of displeasing others, that drove him to engage in risk-taking behaviors. However, as she also pointed out, traders are bred in the trading environment, which is another way of saying that traders start to identify with the trading environment, as happened to Turney Duff. Success, and by default, status within the trading community, is measured by the amount of money made in salary and bonuses. Coming from a working-class background, Nick Leeson had the drive to succeed in the trading world. He was trying to fit into a world in which he desired to belong, but was not familiar with, and his inner insecurities became more evident. His behavior suggests he compensated for those insecurities by becoming increasingly arrogant and defensive. The culture in the securities division at Barings condoned the drive to accumulate wealth and to take risks. Money was the concrete evidence that he was as valued by society as a person who was born into wealth. Nick Leeson was the right person (young, driven, willing to take risk) at the right time (cultural shift in Barings away from conservatism within the securities division) and in the right place (new market, poor regulatory controls and oversight). Unfortunately, he did not have the wisdom, experience, and insight to regulate his own behaviors at the time.

Looking at Nick Leeson's life since Barings, he does not show any pervasive behavioral patterns that are indicative of a psychopath. His time in prison and concurrent cancer diagnosis and treatment appears to have provided him with the impetus to reassess life. He remarried, had children, obtained a psychology degree, and works at a job. Strong narcissistic traits are still evident, but nothing else suggests he lacks remorse or is a predator in society. Leeson is taking advantage of his Barings experience as a motivational speaker on the talking circuit—a more socially beneficial way to channel his desire for fame and fortune. Although the results of his actions were financially devastating for those involved with Barings, it remains difficult to diagnose Leeson as a financial psychopath.

II. Jérôme Kerviel

Jérôme Kerviel is ranked higher than Nick Leeson on the list of top-five rogue traders of all time, with some people placing him in the number-one position. Yet he has never been called a financial psychopath,

despite the ramifications of his actions having the potential to have a far greater impact than Leeson's exploits. By the time Kerviel's trading losses were uncovered by bank executives at Société Générale, they exceeded $73 billion,[13] a sum much greater than the losses amassed by Nick Leeson. And Kerviel's losses came at a time when the financial system was under great stress, which would have compounded the problem had the extent been known. Similar to the situation at Barings ten years earlier, the losses far exceeded the capital base of Société Générale. However, in contrast to the Barings debacle, Daniel Bouton, the CEO, took steps to unwind Kerviel's trading positions before publicly announcing trading losses had been discovered.[14] According to James Stewart in his article in the *New Yorker,* Bouton took advantage of a French law allowing for suppression of information that could "threaten a company's viability" and also informed the governor of the Banque de France.[15] The best derivatives trader at Société Générale was given the task of unwinding the position. By the time the veil of secrecy was lifted, actual losses incurred by the bank were "only" $7.1 billion,[16] a tenth of the original amount. Markets were none the wiser while the toxic positions were removed from the books over several days of trading. Reports detailing Kerviel's activities and his motivation for engaging in such huge trades abound in the press, because Kerviel has kept mostly silent about the motivation behind his trading strategy. Many of those covering financial news are genuinely mystified that he did not personally profit in a financial sense from his actions.

Background[17]

Jérôme Kerviel comes from an unassuming family background in Brittany, France. He grew up in the small coastal village of Pont-l'Abbé with a population under 10,000 people. Born in 1977, he was the second of two boys born to parents of modest means. Oliver, his older brother, seems to be the person Jérôme turns to for support in his adult working life. His father, who died in 2006, was a blacksmith and also taught at a local technical school. His mother was a hairdresser, owning her own shop. The family is portrayed as one in which Jérôme received a lot of positive attention from his mother and older relatives. He is described as caring and polite and enjoyed a variety of physical activities. Both Jérôme and Oliver went into finance after becoming entranced by the trading floor activity depicted in the film *Wall Street.*[18] Oliver eventually worked for BNP Paribas, leaving after his brother's fraudulent activity came to light.[19]

Kerviel's educational achievements were not of the highest caliber. Attending a grande école would be the usual career path for someone focused on pursuing a successful career in government or finance. After failing the entrance examination to get into the grande école Sciences Po Lille, he attended a university at the local town of Quimpers. Focusing on economics and doing well, Kerviel transferred to Institut Universitaire Professionnalisé in Nantes, from which he obtained his undergraduate degree. While there he secured an internship at Société Générale, where a supervisor encouraged him to continue his education in finance. In 2000, Kerviel completed a master's in finance from a program that concentrated on the oversight of investment banking at the University Lumière Lyon 2. Although he interned at BNP Paribas while studying at Lyon, he took an offer from Société Générale when he graduated.

The first position Kerviel held at Société Générale was considered middle office, working with compliance and the firm's computer system. This involved helping to run the database and also the computerized trading systems. Thus, between his internship and his initial job, Kerviel became well-versed in the back-office operations of Société Générale. Within two years, he was promoted to the trading floor, the position to which he had aspired from the beginning of his fascination with finance. In 2005, Kerviel was promoted to the derivatives trading team, known as Delta One. According to James Stewart, his specialty was in turbo warrants, a complex derivative that is sought by investors looking for more leverage. His reported income from salary and bonus the following year was $150,000.[20]

Kerviel's unauthorized trading began shortly after his transfer to the Delta One team. From transcripts taken when Kerviel was questioned by the Paris prosecutor's office after his arrest, he relates how he bet on a downturn in the market with the stock of Allianz. He made €500,000 on the transaction, which spurred him to try again. Supposedly, Kerviel informed his superiors at Société Générale of his Allianz trading profits. The response of his supervisors according to Kerviel was initially one of "satisfaction," though he was told to "avoid such positions, because [he] could just as easily have lost."[21] Kerviel took this to mean he was given tacit approval to make trades if he was making money for the bank. A former trader is quoted as saying that "new hires were often informally given a little leeway to see what they would do."[22] Kerviel appears to have followed the unspoken rule as permission to continue his trading. One former manager testified "that Kerviel had been formally reprimanded—he didn't take them seriously."[23]

According to the transcript, he had already figured out how to cover his activity using similar techniques to those used by Leeson. Evidently, Kerviel had figured out that if he closed out a trade on the same day it was initiated, it would not be recorded as an open position on the daily reconciliation statements. However, the Allianz trade was an uncovered overnight trade, requiring that he make an offsetting trade entry in a fake account to balance the daily reconciliation statement. With Kerviel's superior technology and computer skills, Kerviel was able to falsify e-mails to generate fraudulent documents, rather than resort to the low-technology techniques Leeson had employed.

By 2006, Kerviel was ranked as one of Société Générale's top traders. He had made over €135 million worth of false trading entries. By the spring of 2007, Kerviel was convinced there would be a huge downturn in the market due to the subprime problems that were becoming known in the United States. He began selling short uncovered futures on the German stock market index, DAX, a move reminiscent of Leeson's belief in the rise of the Japanese market ten years earlier. The markets did go down significantly toward the end of February, reaching a low for the year in mid-March but then climbed steadily upward until June, closing at approximately that same level at year-end. The intervening downturns were never as low as the high in late February before the dip on which Kerviel had based his strategy. During the time from March to the first of several downturns during the summer months, Kerviel had to make offsetting false entries to cover his increasingly huge uncovered position of over €5.6 billion. Compliance officers had begun questioning him more frequently, and he was scared that he would lose everything.

Once the markets trended down during the summer, Kerviel was able to unwind his positions and by year-end had made a profit of more than €1.5 billion, according to his testimony. He knew he had to keep his profit hidden, as he was not authorized to conduct any of the trades in which he was engaged, so he continued making false entries into the system to balance the books. His recognized contribution to the Delta One profits in 2007 was €43 million, representing 27 percent of total earnings for the team. Despite stricter regulations imposed at the beginning of 2008, Kerviel continued to engage in unauthorized trading, resorting to more involved machinations to cover his tracks.

From the beginning of 2008 his strategy was to go long in futures, expecting the DAX to rise. As in 2007, he was uncovered, so when the market started dropping, he lost money. Two weeks into the new year, he had amassed an exposure of more than €50 billion. More red flags were

waved, and the compliance department became more persistent in trying to resolve discrepancies. By the third week in January, Kerviel admitted to his illicit trading activities. A psychiatrist was assigned to assess Kerviel's state of mind when he responded to a text to return to headquarters with: "I don't know if I'm going to come back or throw myself under a train."[24] Bouton and his team worked quickly to get rid of the more than €50 billion exposure before informing the public. Kerviel was charged with breach of trust, forgery, and unauthorized use of the bank's computer system for fictitious trades. He was imprisoned for a little over one month and since his release has been working on his defense. At a recent court appearance, in October 2012, the guilty verdict on all three counts reached in June 2010 was upheld. He was sentenced to five years in prison, having to only serve three, and pay €4.9 billion to Société Générale in reparation.[25] Bouton resigned in May 2008. The impetus for doing so came from the negative public perception of him and Société Générale, rather than from any internal push to have him step down. Two of Kerviel's supervisors were fired following internal investigations, and the French Banking Commission fined the bank €4 million.[26] Société Générale is still in business, having weathered both Kerviel's rogue trading and the 2008 global financial crisis that immediately followed.

Psychopath?

It is more difficult to assess Kerviel's personality and behavior against the *DSM-V* and Hare's Checklist for psychopathy, as he has not been as publicly forthcoming about his life as Leeson. However, there are enough pieces of information available from police testimony entered in evidence to conduct a general assessment of Kerviel's character. Starting with the basic investigation of the presence of a "pervasive pattern of disregard for and violation of the rights of others occurring since age 15" as prescribed by the *DSM-V,* there is nothing in his background that suggests this is the case. Of the remaining seven criteria, he did "repeatedly perform acts that are grounds for arrest." That Kerviel lied, there is no doubt. However, the remainder of the second criterion specifies that the acts should be for personal profit or pleasure. This is where it becomes a little difficult. Kerviel did not personally profit from his trading successes. He left the money with the bank and did not alter his lifestyle. He repeatedly said he was proud of his accomplishments and that it "produced a desire to continue, so there was a snowball effect."[27] This sounds more as though he

felt some internal reward from his trading successes, which in turn compelled him to continue unauthorized trading. Rather than pleasure, this appears to be more of a compulsion or an addiction. Kerviel does not display signs of impulsivity or untoward irritability. Continuing to engage in unauthorized trading after promising his brother he would not after the huge exposure of 2007 was unwound borders on qualifying for criterion five: "Reckless disregard for the safety of self or others."[28] The sixth criterion relating to consistent irresponsibility does not seem to apply. The final criterion dealing with lack of remorse is a little more difficult to assess. He freely admits to committing fraud but states that management should shoulder some of the blame: that it is not his alone to bear. He is rational in his statements, which could be considered as cold and calculating (without remorse) or as an objective, analytic assessment of the situation with acceptance of guilt (remorseful). So going strictly by the *DSM-V* criteria, Kerviel does not quite qualify for an antisocial disorder, but he has characteristics that fit not only this disorder but also one of the alternative diagnosis discussed in the previous chapter.

Going through the short version of Hare's Checklist, Kerviel qualifies for only the deceitful category on the Interpersonal domain. On the Affective domain, his qualification depends on how to interpret Kerviel's statements pertaining to who should bear the blame in this case. So we will place a question mark by this category. The last two domains, concerned with lifestyle and antisocial characteristics, do not appear to apply. Kerviel does not appear to be antisocial, per se, but rather is simply not very social. His background does not give any hint of antisocial behavioral issues. Thus, it appears Kerviel has some psychopathic characteristics, but not enough to qualify as a psychopath.

Analysis

Two things are striking about Kerviel. First is the cultural piece that is well documented in the press: he came from a working-class background and ended up in the more elite environment of the derivative trading area of an investment bank. However, both Kerviel and Société Générale agree that he was doing well at his job and he was working his way up. Various statements he made in 2008 suggest he felt uncomfortable from a social perspective. For example, he stated: "I was aware, starting from my first meeting in 2005, that I was less well-considered than the others, as regarded my university degree and my professional and personal

background."[29] He worked long hours and took little vacation time, which could be interpreted as wanting to excel and become accepted, or it may be that he was so engrossed in what he was doing that he did not want to leave work. This latter explanation might be indicative of someone who is on the high-functioning end of the autistic spectrum. It is a possibility that cannot be ruled out, given his talents in the realm of computers and his focus on specific interests. He had developed a model in which he really believed. He had also read extensively about the subprime mortgage industry in the United States and held the conviction that it would eventually affect Europe as well. As with much in finance, timing is everything. Kerviel did not get the timing right, although he did understand how the subprime fiasco would play out.

Some people have compared Kerviel to Leeson, as they both came from working-class backgrounds and made their way onto the trading floor against the odds. Both were young men in the trading environment, but Kerviel was over 25 years old before he became deeply involved in trading. This would be past the age of high risk taking due to incomplete brain development. Other studies have suggested that high levels of testosterone influence returns and that cortisol levels affect risk. Too much of both and sustained over a period of time, which can occur under situations of high stress, potentially lead to poor decision making.[30] This could explain what happened to both men as the markets moved against them and their exposure to high levels of stress increased.

Leeson's promotion came at a time when Barings was looking to expand and wanted young, risk-taking talent. Leeson did not attend university and so learned everything about the business on the job, starting in the back room. Kerviel had the benefit of obtaining two degrees, thereby integrating his on-the-job training with theory. Kerviel also had shown his abilities with computerized trading before he was let loose on the trading floor. Although the cultures of both banks condoned risk taking in trading, Leeson's situation was more uncontrolled. Furthermore, Kerviel does not appear to have any of the same narcissistic tendencies that Leeson has: even after his coworkers voted him "the coolest," he did not swagger around the trading floor trying to impress people with his prowess as a trader.

Kerviel not only understood how the middle room functioned but also had the ability to see how Leeson had covered his tracks at Barings. Some of Kerviel's methods to deflect attention are similar to those used by Leeson: faking internal and external memoranda and setting up fake accounts to offset are just two examples.

It should also be considered that the culture of Société Générale was similar to that of Barings prior to the appointment of Daniel Bouton in 1997. Bouton did not come from a privileged background but was academically more successful at the outset than Kerviel. He attended a grande école and was fortunate enough to acquire powerful mentors who helped his ascension through the ranks. Bouton oversaw the shift in Société Générale's culture by increasing the role of derivatives trading so that by 2000 Société Générale was well established within the world of equity derivatives. He did this by hiring people who were well qualified in mathematics, doing exactly what other investment banking houses in the United States and the United Kingdom were also doing at that time. Unlike Kerviel, Bouton acquired the trappings of wealth and success, ensconcing himself in the world of elite leaders. Kerviel by contrast, seems to have become entranced with his model, and money was secondary. Supposedly in the year when his trading earned the bank €43 million, he asked for a €600,000 bonus and was given half that sum.[31] He does not appear to be a gambler per se, but truly believed in his model and got stuck with bad timing. He now works for a computer company, so it appears that this is his passion, which suggests that he might instead lie somewhere on the high-functioning end of the autistic spectrum.

To date, Kerviel has not served time in prison. However, he failed in the appeal of his 2008 conviction for breach of trust, forgery, and unauthorized use of computers. He was arrested by French police in May 2014 after walking for two months from the Vatican, having met with the Pope. The French public has supported him, and he has become known as "the antihero."[32]

8

Biotrophic Parasites and Psychopaths

In the previous chapter, we explored the character and behavior of two traders who acted independently in their quest to exploit the financial system for financial gains. Although rogue traders cause disruption in the system, other more subtle players enlist the assistance of employees, colleagues, friends, and acquaintances to aid them in bilking the financial system, instead of relying solely on technology. In the natural world, parasites that rely on the survival of their host are known as biotrophic. They need their host to stay alive to live themselves. There is a relationship between the parasite and the host, to which the host may or may not have consented. The English author and dramatist Sir Henry Taylor commented that "shy and proud men . . . are more liable than any other to fall into the hands of parasites and creatures of low character. For the intimacies that are formed by shy men, they do not choose, but are chosen."[1] This is a perfect description of how people can unwittingly become the prey of predatory psychopaths. Two men who acted like biotrophic parasites in carrying out their strategies bear consideration in our search for financial psychopaths.

The first is better known to the general public—Raj Rajaratnam, founder of the Galleon Hedge Fund. He was convicted, along with several people in his circle who had abetted him, in 2011 of insider trading. The second person is more obscure and would have stayed out of the public spotlight had his conviction in 2011 not been related to the mortgage industry and failing banks. Lee B. Farkas was chairman and owner of Taylor, Bean & Whitaker (TBW), a once small-time mortgage company based in Florida that, thanks to the housing boom prior to 2008, grew to huge proportions. Farkas, similar to Rajaratnam, recruited

others to assist him, the lives of whom were also radically changed by their subsequent indictments and convictions.

I. Raj Rajaratnam

Background[2]

Raj Rajaratnam, the Sri Lankan-born founder of the Galleon Hedge Fund, came to the United States in 1981 to attend the MBA program at the University of Pennsylvania's prestigious Wharton School. This was not the first time he had traveled far to obtain a good education. At the age of 11, his parents sent him to boarding school in England, enrolling him at the academically recognized Dulwich College, which was founded in 1635 during the reign of James I. Rajaratnam's parents immigrated to England two years later in 1971, when political upheavals following the independence of Sri Lanka threatened their survival as minority Tamils. His younger brother, Rengan, was born that same year. Similar to the Kerviel brothers, both Raj and Rengan chose careers in finance; however, the Rajaratnam's family and educational background gave them a head start that had not been available to the Kerviel family. Rajaratnam's father is described as "a soft-spoken and conservative businessman who loathed risk."[3] He was in charge of the South Asian operations of the Singer Sewing Machine Company.

Raj Rajaratnam completed his undergraduate degree in engineering at Sussex University in England in 1980, indicating he had some aptitude for mathematics. Anita Raghavan noted that, while he was in the credit training program at Chase Manhattan Bank, he was known as "HP Raj" because "he didn't need a Hewlett-Packard calculator to figure out mathematical computations; he could do complex calculations in his head."[4] The engineering degree provided him with a technical background that would come in useful following his graduation from Wharton, at which time he joined the electronics sector as an analyst in the research department at Chase with a salary of $34,000. Like many Wall Street neophytes before him and since, Rajaratnam soon determined that he could personally make significantly more money by trading than by doing research.

Accordingly, in 1985, he joined Needham & Co., a small boutique investment bank that focused on trading in the technology and healthcare sectors. It was out of the mainstream and hired people who were not typical Wall Street bankers. Rajaratnam had latitude to follow his own ideas and convictions at Needham and chose to concentrate on the

US semiconductor industry, making it his specialization. He took road trips to Silicon Valley to learn more about the companies and to meet the people running them. Raghavan wrote that he "unleashed his natural charisma at social gatherings"[5] and clearly captivated the people whose companies he was covering. His contacts grew, including many who were part of the new wave of South Asian immigrants who had joined technology companies in the Silicon Valley. One former colleague at Needham described Rajaratnam's collection of contacts as a sort of "South Asian mafia."[6]

While working at Needham, Rajaratnam's outer personality changed. Formerly known for being quiet, he "took on the bravado of a Wall Street wheeler-dealer."[7] Another Needham employee described this new Rajaratnam as "bossy, he was loud, and not a particularly nice guy."[8] These same descriptors are echoed by others who worked with or for him throughout the remainder of his career. He was known for partying in Wall Street style, complete with women, alcohol, and drugs. Stories have been published about his parties, which were "flamboyant . . . to show he was a big shot and to indulge his network of associates."[9] He has denied all behaviors that would appear to tarnish his reputation, such as smoking marijuana with his guests.

Rajaratnam was also known to chastise colleagues for not getting "new" information from company executives when talking with them. His ferocious temper has been mentioned in numerous accounts—all of which Rajaratnam puts down to "disgruntled former employees and colleagues."[10] He collected and traded information that he used to leverage his position. His success paid off, and he was made president of Needham & Co. in 1991. The following year he raised $250 million from his clients at the bank and started the hedge fund Needham Emerging Growth Partners within the bank. He also expanded the network of people whom he could trust to help him, starting with friends of South Asian descent and former Wharton classmates.

By 1994 Rajaratnam's stake in Needham had risen to 17 percent, and he was making over $1 million a year. His position was second only to the founder of the firm. As president, Rajaratnam had access to corporate executives and the proprietary information they disclosed to him in order to conduct business. At the same time, as manager of the hedge fund, Rajaratnam was obligated by regulations not to use that information for trading purposes. Concerned over Rajaratnam's dual roles and the potential for abusing regulations requiring a separation between corporate advisory services and trading functions within the firm, "at least

five Needham executives told George Needham that they were concerned about Rajaratnam's business practices"[11] over a period of several years, according to Anita Raghavan's account.

Rajaratnam eventually left Needham at the end of 1996 to start a hedge fund that he established in 1997 with three former Needham associates. Initially, the Galleon Group was funded with $350 million that Rajaratnam had raised from friends and family. He was methodical in the way he arranged the company to ensure it would be well regarded within the industry. He hired the best individuals with educational backgrounds and resumes that spoke of respectability. People on the advisory board were well-known, highly respected investors in their own right. As an indication of how well Rajaratnam succeeded in portraying his company as reputable and successful, George Soros, the well-known successful investor, contributed funds.

The Galleon Fund was in the right sector (technology) at the right time during the late 1990s and into the new millennium. Just 11 years after its inception, Galleon had become the largest technology hedge fund in the world, with $7 billion under management. Rajaratnam's estimated net worth at the end of 2008 was $1.5 billion. During the intervening years, Rajaratnam had brought more highly placed people into his information network. The key figures who would later be indicted with charges of insider trading included Roomy Khan, a female engineer with an MBA who was fascinated with Wall Street and its dealings; Rajat Gupta, who, before his retirement, was global managing director at the prestigious management consulting firm McKinsey; Anil Kumar, a Wharton classmate and McKinsey senior partner; Rajiv Goel, who had also attended Wharton at the same time as Kumar and Rajaratnam and was working at Intel Capital; and Danielle Chiesi, an associate at the Bear Stearns hedge fund, New Castle.

Raj Rajaratnam was arrested at his home in October 2009 and charged with 14 counts of conspiracy and securities fraud. The evidence against him had been built up using recordings of his conversations with most of the individuals named above, plus many more. Rajat Gupta was the one person for whom the FBI needed more evidence before bringing an indictment against him. They offered Rajaratnam the same deal that had been offered to the other informants: he could choose to cooperate with the investigation by allowing the wiretapping of his conversations with Gupta or face maximum time in prison for his role in the insider-trading network. Rajaratnam refused to cooperate and instead pled guilty. The Galleon Fund was subsequently closed after investors requested their funds upon hearing of his arrest. All investors received their monies.

Of the five witnesses called upon to testify on Rajaratnam's behalf, the chief executive of a children's charity to which Rajaratnam was a donor gave the most moving testimony. It was not, however, enough to overcome the damning evidence that rang through the courtroom as the wiretaps were played, with Rajaratnam's voice coming through loud and clear. In the end, a jury found Rajaratnam guilty on all 14 counts in May 2011, and he was sentenced to 11 years in prison. His scheduled release from the Federal Medical Detention Center in Ayer, Massachusetts, is in July 2021. Rajaratnam's advanced type 2 diabetes and failing kidneys qualified him for the medical correction facility instead of a regular prison. According to reports, he has lost a significant amount of weight, after having been overweight for years. Married since 1988, Rajaratnam and his wife have three children.

Psychopath?

Because of the multiple cultural overlays, it is difficult to assess Rajaratnam's personality strictly following the criteria from the *DSM-V.* He was raised as a minority Tamil Sri Lankan and then attended boarding school in England, which would add yet another cultural layer to his personality structure and the way he would come to view the world as an adult living in America. Not knowing anything about his life in boarding school, it is also difficult to determine whether he acted inappropriately as a youth.

Of the seven primary criteria, he meets the first one, which addresses whether someone conforms to social norms or engages in behaviors that can result in arrest. Rajaratnam knew he was engaging in illegal insider trading, yet felt that he was playing by Wall Street rules, that is, following the norms for that particular societal group. This is similar to the situation in which Kerviel found himself. Rajaratnam also meets the second criterion, which considers the use of deceit through lying to profit personally. The vast wealth that Rajaratnam accumulated as head of Galleon, placing him among the wealthiest men in America, is evidence that he profited from the perpetual lying in which he engaged as a matter of course.

It is difficult to perceive of Rajaratnam as impulsive. Every move he made appears to have been calculated. No relationship was entered into unless there would be some benefit to him at some point. The care with which he set up the Galleon Fund also speaks to a person who is not impulsive. Rajaratnam's mathematically oriented mind was used for

determining long-term strategy. Thus, the third criterion seems grossly inapplicable. However, the fourth criterion, dealing with irritability and aggressiveness, may be germane. He was well known for his aggressive and bullying temper, which he would use when he deemed it necessary and effective.

Continuing through the criteria, one could argue whether Rajaratnam has "reckless disregard for the safety of self or others."[12] There is no question that he used other people and placed them in situations in which they could be prosecuted and sent to prison. The same is true of himself. However, he also refused to be wired to help the FBI win their case against Gupta. His reasoning went as follows: he would not do to someone whom he respected what had been done to him. There is a sense of moral right and wrong within Rajaratnam's system of morals, which does not necessarily coincide with American societal values. Whether he feels remorseful for his actions is difficult to assess. He was angry with the South Asian friends who betrayed him. He felt they should not have cooperated with the investigation. Overall, he did not appear remorseful; rather, he seemed more stunned that his own immigrant community in America did not support him.

Hare's short version of the Psychopathic Checklist is somewhat easier to apply in Rajaratnam's case. Examining the Interpersonal dimension first, Rajaratnam easily fits the descriptors of grandiose and deceitful. In some aspects of his life, Rajaratnam could also be considered superficial; for example, throwing big parties to impress people. The Affective dimension is a little more mixed, as Rajaratnam seemed to be divided on some of the variables. On one hand, he showed little to no remorse for his insider-trading activities and little empathy for those who worked for him. But, on the other hand, he seemed empathic toward Gupta and his family situation. Rajaratnam overall accepted responsibility for his actions, saying that he felt he was treated fairly by the justice system.

The third dimension on Hare's checklist relates to characteristics denoting an impulsive, undirected lifestyle, which did not seem to apply at all to Rajaratnam. As commented on earlier, he seemed to be calculated in all aspects of his life. The only area of his life in which he displayed any degree of recklessness or irresponsibility would be around the infamous parties he gave and his interest in beautiful women. Given the conflicting evidence between what has been reported and Rajaratnam's denial of much of it, it is difficult to know exactly what is true. Again, the fourth domain concerned with antisocial characteristics has little information on which to base an assessment.

Analysis

In researching Raj Rajaratnam's background, it became apparent that he was more comfortable giving interviews to women from South Asian descent than journalists from other cultures. One advantage of using the writings of these women when analyzing Rajaratnam is that they have an insider's understanding of the South Asian experience and how it fits into an American context, which helps to comprehend where cultural differences come into play.

Anita Raghavan has described Rajaratnam as a "man of Falstaffian appetites and a craving for power."[13] His parties were one outward sign to show he had achieved the status of a successful and important person on Wall Street, and thus could be considered a worthwhile person. But as discussed in an earlier chapter, the immigrant psyche often retains the feeling of not having enough and pushes to obtain more. Rajaratnam said that "[a]fter a while, money is not the motivation. I want to win every time. Taking calculated risks gets my adrenaline pumping."[14] Rajaratnam's desire "to win every time" may be a compensation for his feelings that he "saw himself as the underdog"[15] throughout most of his life, starting as a minority in his birth country and continuing through his status as an immigrant in two countries. "Taking calculated risks gets my adrenaline pumping" suggests that the environment of Wall Street hedge funds was a game to him, much like Kerviel's desire to program a model that would trade derivatives effectively. Evidence of winning the game for both men would be shown by an accumulation of wealth. The difference was that Kerviel would not know how effective his model was until after the game had been played. By contrast, the game for Rajaratnam involved beating everyone to the starting gate, rather than waiting to see how the race would turn out—because he already knew the outcome before the race was run.

Rajaratnam based his trading strategy on old-fashioned methods, namely collecting reliable inside information from trusted sources, rather than trying to fashion a complicated model to capture market arbitrage opportunities. He took long or short positions in the stocks based on how he expected the market to react to the upcoming release of new information. Raghavan described Rajaratnam as an "expert manipulator . . . [who] knew just the right way to push corporate insiders to pass along confidential financial information long before it was publicly released."[16] One of his techniques was to put people in a position where they felt they owed him for something he had done for them, such as making desired

introductions. Other stories support his ability to charm and wheedle information from people. In the language of Babiak and Hare, Rajaratnam was a puppeteer, both manipulating and bullying people, using whichever method was more effective in a given situation.

From a physiological perspective, Rajaratnam's comment above suggests that he was addicted to the rush from taking risks and winning. It does not appear that Rajaratnam was an impulsive or risk-loving gambler: he was careful to ensure that the information he was trading on was correct before using it. His risks in terms of financial outcomes were limited in many respects; the risk was primarily in the probability of getting caught, which does not seem to have been an overriding concern.

Rajaratnam's methods for obtaining useful information went beyond the traditionally accepted "mosaic theory" that is legal. In mosaic theory, analysts comb through different sources of publically available information and piece together the seemingly separate and independent pieces of news, which form a new picture composed of the small mosaic pieces of information, thus providing analysts with new insight into a company. Rajaratnam took the gathering of the small pieces of information into the private sphere, which placed the use of it in the illegal realm of data collection. For instance, by Rajaratnam's reasoning, becoming sexually engaged with female executives of technology companies who had material information about their companies was an acceptable and encouraged way to collect data. He did not see anything wrong with this method of gaining an advantage over the competition. According to Raghavan, Rajaratnam "denies he received and traded on any material nonpublic information."[17] In his defense, Gregg Jarrell, a professor of finance and economics at the Simon Business School, Rochester, New York, took the stand to testify. Jarrell, who was schooled at the University of Chicago and had worked at the SEC, showed that Rajaratnam's trading successes did not necessarily indicate insider trading. Critics of his presentation claimed that Jarrell had selected specific stocks to make his point, omitting others that would have shown a different picture.[18]

The cultural overlay becomes important when assessing Rajaratnam's attitude toward what constitutes inside information. Because he had been raised in Sri Lanka during his formative years, he had integrated those cultural norms and values into his personal way of approaching situations. As noted in an earlier chapter, other cultural norms and values are not totally in alignment with American normative values. Preetinder Bharara, the US Attorney for the Southern District of New York stressed the point that "[t]here are rules and there are laws, and they apply to

everyone, no matter who you are or how much money you have."[19] One South Asian journalist alluded to a "more elastic view of rules, and a more keenly developed art of networking" when making the comparison between American and South Asian perspectives of what constitutes acceptable behavior in this regard.[20] She further noted that "[t]here are rules and laws in India and Sri Lanka, too, but they can be tested, ignored by those who have money or friends."[21] This is not necessarily completely different from America, but this elasticity is more out in the open in India and Sri Lanka. Regardless of his vast wealth, Rajaratnam, being a first-generation immigrant, was not part of the privileged American inner circle.

In an interview with Suketu Mehta, Rajaratnam is quoted as saying, "In Sri Lanka, I would have given the judge 50,000 rupees and he'd be sitting having dinner at my house"[22] to illustrate the difference between the Sri Lankan and American justice systems. When questioned by Mehta as to the disproportion number of Indians being indicted, Rajaratnam attributed it to "Roomy Khan's network [being] Indian"[23] and not to racial profiling. His younger brother, Rengan, disagreed. He saw no difference between what Raj was convicted of doing and how Wall Street has functioned over time. According to Mehta's report, Rengan commented that "[f]or years these guys were sitting around in sports clubs and exchanging information. That wasn't a crime. And now we immigrants do the same thing and it is?"[24] From this statement, it appears that for Rengan, who was indicted in 2013 for insider trading in his own hedge fund, Sedna Capital, the fundamental differentiating factor was the recent immigrant status of himself and his brother. Rengan Rajaratnam's case is due to go to trial in June 2014, having been subject to several delays.

One other person who came to light through Raj Rajaratnam's investigation was Danielle Chiesi, a former associate with New Castle (part of Bear Sterns Asset Management group), who became part of Rajaratnam's information collection team. She is one of the few women on Wall Street who have been indicted and convicted. A former beauty queen, she also believed in using relational-based techniques to acquire privileged information. She used her acknowledged sex appeal, to which many of Silicon Valley's male executives (among others) were attracted. Having obtained pertinent data, she would then pass it along to Rajaratnam, as well as to her boss at New Castle.

As we saw in chapter 6, female psychopaths have been shown to display different traits than males, resorting primarily to sexual manipulation to

gain what they want. Danielle Chiesi's behavior throughout her working career has been permeated with sexual innuendos and actual affairs with men, such as Robert Moffat, an executive at IBM.[25] Much has been said in the media about her multiyear affair with Mark Kurland, who chose not to leave his wife for Chiesi. After her sentencing, Chiesi was able to change her demeanor to what was expected of her. For the judge, she presented as somber and serious, but with her back to the judge, she seemed more effusive and bubbly, somewhat inappropriate given the circumstances. She was sentenced to 30 months in prison, with two years of supervised release and 250 hours of community service for her role in Rajaratnam's insider-trading network. However, prosecutors believe she was involved with insider trading long before helping Rajaratnam, which may explain the long sentence.

II. Lee B. Farkas

One lesser known person who has actually been convicted and sentenced as a result of financial dealings involving the mortgage industry is Lee Bentley Farkas. Supposedly the largest nondepository mortgage company in the United States prior to its downfall, Taylor, Bean & Whitaker Mortgage Corporation was a private company located in Ocala, Florida, and owned by Farkas. As chairman of the company, Farkas had carefully handpicked an executive team to help him grow the company from its origins as a small local bank into a national lending institution. Piecing Farkas' story together was more complicated, in part due to his relative obscurity in the financial world, but also because of the way in which Farkas divulged information. He took care to ensure that no one person could put together the total picture of any facet of his life or business. Whatever Farkas allowed someone to know, that person would think they had the whole story, not realizing it was just a fragment.

Background[26]

Lee Bentley Farkas was born in Albuquerque, New Mexico, in 1953. His sister, Terri Huber, recalled him as being responsible but "consumed with being respected and successful," as well as "very smart and always talking about business."[27] He started college at New Mexico State but did not finish, taking over the family insurance business when his father died in 1974. The business did not do well under his direction, and he sold it before the end of the decade.

Farkas eventually made his home in Ocala, Florida. He lived openly as a gay man with his partner, Coda Roberson. Farkas saw the demographics of Ocala as offering him an opportunity on which he could capitalize. He started a residential housing construction company, Golden Years Construction, financed by Roberson. The company targeted older people who were building their retirement homes. According to *American Greed,* Farkas "was accused of shady business practices" by individuals who did business with him in Ocala. He owed money and had legal judgments lodged against him. The construction company went out of business in 1989.

Two years later, Roberson's mother loaned Farkas $75,000 to buy Taylor, Bean & Whitaker (TBW), which at that time was a small local mortgage company. By the end of 2000, more than 6,000 mortgages a year were being processed by the company. Farkas was buying businesses in Ocala, as well as houses along the East Coast from Florida to Maine for investment and personal use.

One of his early hires for the executive team around this time was Jason Moore, a recent graduate from Cambridge University, England. At the age of 28, Moore was selected to head Internet innovations at TBW. Moore stated, "I wasn't looking for a job, I wasn't qualified, but I took it," citing the six-figure salary offered by Farkas as an inducement.[28] He was one of several men who were hired not for their expertise in the mortgage business, rather because Farkas liked to have them around. As the former COO, Jason Moore said that Farkas "was like a financial prophet . . . He understood that those who mastered technology would be ahead of the curve when it came to originating loans."[29] In 2001, Farkas managed to put together a joint venture with Fannie Mae and Dexma (a Minneapolis-based application software provider) called Community Banks Online (CBO). By helping community banks work with consumers online for their mortgage approvals, Farkas was ostensibly engaging in what appeared to be a mutually beneficial service for TBW, the community banks, and Fannie Mae. The underlying purpose from Farkas' point of view was to have a conduit that gave him access to personal financial information, which he could then manipulate. This was later confirmed by Moore.[30]

Fannie Mae started buying loans from TBW in 1995, eventually becoming TBW's biggest client. They abruptly stopped doing business with the company in April 2002. In a statement to the press, Farkas said he did not know why that had happened. A Fannie Mae executive claimed that Farkas had sold a mortgage loan that Farkas did not own. When Fannie Mae looked further into the irregularity, it appeared that Farkas

may have been involved in fraudulent loan practices for some years before that one particular loan in question brought the previous ones to light. According to records, Fannie Mae suspected in 2000 that TBW might be selling them fraudulent loans. Cathy Kissick, an acquaintance of Farkas, who worked at Colonial Bank, called Fannie Mae to inform them that a loan they bought had actually been sold earlier to Freddie Mac. Statements filed in court trials in 2008 allege that TBW was engaged in selling fraudulent loans to Fannie Mae.[31] However, in 2002, Fannie Mae did not divulge the reason for terminating business with TBW. Instead, the agency chose to remain silent so that the markets would not be disrupted while it moved the loans off its books to a third party.

Following the termination of business with Fannie Mae, Farkas had his then-vice president of secondary marketing, Raymond Bowman, use his connections at Freddie Mac to persuade them to increase their purchases of loans from TBW. Bowman was successful in getting Freddie Mac to buy conventional loans originated by TBW and was subsequently promoted to president of the company. The fallout with Fannie Mae was explained by saying the bad loans had been errors and/or that the loans had been sold by mistake, an excuse that was used repeatedly to cover up fraudulent activity.

By the end of 2002, Farkas had surrounded himself with a good management team and was using his strategy of Internet mortgage origination. Taylor, Bean & Whitaker had become an originator, servicer, purchaser, and seller of residential mortgages. To further his expansion plans and add more credibility to the company's credentials, Farkas targeted Paul R. Allen, a former executive at both Fannie Mae and Freddie Mac to become CEO. Allen was initially reluctant to join but, after talking with former colleagues at Fannie Mae, was reassured that Farkas was legitimate. Allen saw the position as an opportunity to develop and implement models that would grow the business. Farkas lured him by offering intangible benefits he knew would be particularly appealing to Allen: the opportunity to work remotely from his home in Virginia, allowing Allen to be with his family, as well as use of the corporate jet to come to Ocala for business meetings and also to visit with his daughter from a previous marriage. Allen would not have to be present in Ocala for the day-to-day running of the business; in fact, Farkas preferred that Allen focus his attention on long-term strategic initiatives and not concern himself with the books at all.

Unlike other members of Farkas' executive team, Allen had an impressive resume. After finishing his undergraduate degree in economics and

master's in business administration at Tulane University in New Orleans, Louisiana, he completed a doctorate in finance at the University of Washington. While teaching at Louisiana State University, he coauthored a paper in 1986 with C. F. Sirmans, a lifelong academic and prolific author, who currently holds an endowed chair in real estate at Florida State University. The paper, entitled, "An Analysis of Gains to Acquiring Firm's Shareholders: The Special Case of REITs," was published the following year in one of the leading finance journals, *Journal of Financial Economics*. It examined returns to acquiring REIT companies and showed a significant abnormal gain, unlike with regular corporate acquisitions. The gain was attributed to improved management of the acquired assets. Allen decided to leave academia while his work was in demand and joined Freddie Mac as a senior economist in 1986. His strong mathematical abilities and reasoning helped him to develop strategies that would be used in the mortgage side of the banking industry.

While at Freddie Mac, Allen was in charge of pricing, credit policies, and the daily price-management process. He rose to divisional vice president before moving on to Fannie Mae in July 1994. Articles at the time in *American Banker*, a trade journal, called Allen a "coveted executive." Freddie Mac instigated a suit against Fannie Mae, concerned about the numerous secrets Allen possessed about how Freddie Mac did business. The suit was eventually dropped. Staying at Fannie Mae for four years, Allen rose in the ranks to become vice president of financial consulting of the Single Family Business Division. After Allen's departure from Fannie Mae in 1998, an accounting fraud scheme started that "included manipulations to reach earning targets so that Mr. Raines, Mr. Howard, Ms. Spenser and other company executives could pocket hundreds of millions in bonus money,"[32] running until 2004. Several top executives at Fannie Mae were indicted for their participation in the scheme. According to the *New York Times,* Raines "agreed to pay $24.7 million, including a $2 million fine. Mr. Howard is paying $6.4 million and Ms. Spenser $275,000."[33] Fannie Mae also paid a $400 million civil fine and agreed to "make top-to-bottom changes in its corporate culture, accounting procedures and ways of managing risk."[34] The willingness of Fannie Mae to make such sweeping changes suggests that the structure of this segment of the financial industry left it open to fraudulent activity.

Allen left Fannie Mae in August 1998 to become CFO and executive vice president of North American Mortgage Company, which had been bought by Dime Bancorp the previous year. At North American Mortgage Company, Allen managed the fiscal operations relating to their $45

billion portfolio. Washington Mutual took over North American Mortgage in 2002.

Prior to being hired by Farkas as CEO of TWB in August 2003, Allen founded and was president of a consulting firm, Oakmont Advisors, LLC. The firm "offers a wide array of services to improve business performance . . . targeted primarily to clients who currently originate mortgages."[35] Obviously, the firm tapped into Allen's well-developed skill set from his employment in the mortgage industry. He also founded and was CFO of PROACSYS, LLC, a business reengineering firm. That firm was sold and is now a subsidiary of First Tennessee Bank National Association.

When Farkas hired Allen in 2003, he publicly praised him for his "knowledge of the mortgage industry" and his "entrepreneurial spirit." These two traits were highly desired by Farkas as he continued to expand the small mortgage firm he had started back in 1991. Allen worked from his home in Virginia, presumably because he was in closer proximity to Freddie Mac in Washington DC. Over two thirds of Taylor Bean's business was with Freddie Mac, and Allen's connection with them was important. Reports in the *Ocala Star-Banner* indicate that Farkas did not encourage Allen to come down to Ocala, where he could better examine the books of the company, preferring that his CEO remain in Virginia and away from the inner circle of executives.

The business relationship TBW had with Colonial Bank in Alabama had also grown, leading to TBW becoming Colonial's largest client. Cathie Kissick, a senior vice president, and Lee Farkas had worked together for some time, and Farkas had found her easy to control. So as TBW's debt to Colonial mounted to over $100 million, Farkas used Kissick to help cover up the overdrafts. By 2005, Cathie Kissick was concerned that the problem with TBW was getting out of hand, but she was not able to stand up to Farkas.

Also in 2005 a special-purpose entity named Ocala Funding made its debut. Given the characteristics of the structure and the purpose it was supposed to serve for TBW, it would appear that Allen might have been responsible for its design. However, the manner in which it was actually used suggests that Farkas had an ulterior motive for creating the financial entity that he did not share with Allen. Purportedly, Ocala Funding's purpose was to fund the loan mortgage business by buying home loans that would then be securitized into bundles, essentially creating asset-backed securities, and sold to Freddie Mac. Investors trusted that there were actual loans on real properties backing the newly created securities. It served as a short-term credit facility.

In reality, with the creation of Ocala Funding, Farkas was better able to hide the various fake loans that he was creating using actual loan applications as templates. This activity was a continuation of what he had done previously with Fannie Mae and other unsuspecting victims, but on a larger scale and with a veneer of financial sophistication, endowing the endeavor with an air of authenticity. Both Deutsche Bank and BNP Paribas were sufficiently impressed with the facility and together put almost $2 billion into Ocala Funding.

By 2006, TBW had 24 branches in 12 states, with plans to expand internationally. Jason Moore resigned as COO but remained as a consultant. He was aware that TBW's business activity prior to his resignation was not all above board, commenting that "I had to publicly state things I knew not to be true."[36] Moore "chose to save himself,"[37] believing that Farkas could not be saved, and distanced himself from TBW completely with his resignation in 2007. His strategy appears to have been successful, as he was never indicted and has given several interviews describing what went on at TBW.

After housing the company in relatively rundown facilities, Farkas erected a new company headquarters in 2008. It was excessively luxurious in an over-the-top Las Vegas show style. He hired a top-notch chef to produce meals for the executives in the well-appointed dining room. Farkas ran his personal expenses through the company. With his newfound wealth, he had also been magnanimous in giving millions of dollars to a wide range of charities and causes in the local Ocala community, earning him a great deal of goodwill among community leaders. Farkas had managed to build up the company until it eventually had over 2,000 employees nationwide, with over half in the Ocala vicinity. Farkas controlled every aspect of the company, having carefully kept each of his executives relatively isolated from each other, particularly his CEO.

As a result of the financial crisis, Colonial Bank applied to tap into TARP funds in 2009. Farkas pledged to give $150 million to Colonial, which needed $300 million before receiving funds from the government program. In the process of checking Colonial's books, regulators noticed the link to TBW. The house of cards built by Farkas collapsed when regulators became suspicious of loans with Colonial Bank and started their investigations into TBW. By this time, Farkas had opened a car wash, a gym, as well as restaurants in Ocala. His less widely known investments included a number of gay bars in Atlanta, which were held through a company named Thunderbird, LLC, listing Farkas as manager, according to reports in *Gavoice*.[38] Moore corroborated the ownership of the bars in

his interview in *American Greed.*[39] Farkas' exploits became increasingly extreme. Moore enumerated a number of them: Farkas left Roberson, his partner of 35 years, for a younger man; he bought a strip club in Atlanta; and he proceeded to hire the employees to work at TBW as account executives.[40] According to Moore, Farkas felt he was untouchable.[41] During the summer of 2009, the FBI convinced some of Farkas' colleagues to become informants in return for reduced sentences for themselves. All the members of Farkas' executive team testified against him. In one taped conversation with Desiree Brown, the treasurer at TBW, Farkas revealed that he did not think people would figure out what was going on.[42]

The FBI raided TBW's headquarters in August 2009, closing down the business. At that time, the company's portfolio with Freddie Mac was valued at over $51.2 billion. Another $26 billion was with Ginnie Mae. The Ocala economy was seriously impacted by the mismanagement of the firm, as TBW was a major employer. Trials and sentencing of people involved with TBW took place in 2011. Farkas was found guilty of securities fraud, bank fraud, wire fraud, and conspiracy to commit fraud and sentenced to 30 years in prison. He is serving his sentence in the Butner Federal Correctional Complex, in Butner, North Carolina, the same facility where Bernie Madoff is also serving time. Paul Allen, the CEO, received 40 months plus two years supervised release for "making false statements and one count of conspiring to commit bank and wire fraud."[43] He served his time at the Brooklyn Metropolitan Detention Center in New York state. Allen was also ordered to pay restitution of $2.9 billion. The president, Raymond Bowman, was charged with "conspiracy to commit bank, wire and securities fraud, as well as lying to federal agents about his role in a fraud scheme"[44] and sentenced to two and a half years in prison. The two women convicted received longer sentences for conspiracy to commit bank fraud, wire fraud, and securities fraud: Desiree Brown, the treasurer, received six years, and Cathie Kissick, senior VP at Colonial, was sentenced to eight years in prison.[45]

Psychopath?

The first of Farkas' characteristics to be aware of is his charismatic personality. Jason Moore, the former COO of TBW said that Farkas "was like a cult leader. He had the charisma of a Gatsby."[46] Information about Farkas' early life was not available, making it difficult to discover whether he had a "pervasive pattern of disregard for and violation of the rights

of others"[47] as a youth. However, it is possible to see whether any of the other criterion under the *DSM-V* or Hare's checklist apply. The second criterion in the *DSM-V* requires "deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure."[48] Various reports taken from court documents and newspaper articles in both trade and local newspapers show that Farkas lied extensively and that he conned other people for personal profit and/or pleasure. He managed to siphon over $40 million from TBW through the use of companies set up as fronts to move money. One could also say he used companies as aliases. Much is made by the Ocala press of his varied collection of assets prior to their seizure by the government: the private jet bought for $28 million that was paid for using a series of fraudulent loans on condominiums that didn't exist; properties on the East Coast, some of them owned through a limited liability company he established in Illinois; personal loans worth more than $15 million; an extensive classic car collection, of which Farkas was proud—in particular, a 1954 Cadillac Eldorado convertible seized by the government. As reported by the *Ocala Star-Banner,* he petitioned the government from prison not to sell the car as it "is an irreplaceable, unique asset . . . It is impossible to replace."[49]

The third criterion as specified in the *DSM-V* is difficult to assess, as it appears that Farkas in some regards did plan ahead, but in others did not. We will address this again using Hare's checklist. The fourth criterion examines irritability and aggressiveness, focused on physical actions. While it does not appear that Farkas was physically violent, there has been reasonable anecdotal evidence, from testimony in court and letters to the editor in the local paper, to suggest that he was verbally aggressive in situations where it was inappropriate.

Whether he displayed reckless disregard for himself is difficult to assess, but there is evidence that Farkas did not care what happened to other people. One local Ocala attorney from whom Farkas had bought a property discovered that three mortgages had been taken out in his name using a forged signature, unbeknownst to him. Within Farkas' own company, president Raymond Bowman left TBW less than a year before its ultimate demise. As quoted in the *Daily Bankruptcy Review,* Bowman gave the reason for his resignation as "an anxiety diagnosis and a screaming match with Farkas"[50] over problems with the fraudulent practices. According to Bowman, Farkas replied, "That's not your issue—it's mine."[51] Farkas' actions suggest that he cared more about his own well-being and not that of his president. However, he was able to entice Bowman back as president with an annual salary of $440,000 and other benefits that

included a private nurse for his ailing mother.[52] That particular benefit linked his employment at TBW with concerns in his personal life serving to strengthen Farkas' hold over him. This same type of benefit was used to bring Allen to TBW when Farkas offered him use of the company jet to visit his daughter in Florida. Paul Allen also stayed with TBW, returning as a consultant after the firm no longer existed. When asked in court why, Allen replied he "felt that Taylor Bean exhibited a lot of 'potential' and could be sold to a third-party."[53] Had that potential been realized, Farkas had promised Allen a $5 million bonus. Yet in a personal correspondence, Allen talked about the impact it would have had on his family and career had he left TBW, with no mention of the possible bonus. Thus it seems that Farkas knew how to exert influence over Allen to get him to do his bidding without any concern for Allen's personal well-being.

The sixth criterion in the *DSM-V* addresses whether the person displays consistently irresponsible behavior as demonstrated by "failure to sustain consistent work behavior or honor financial obligations."[54] Examples from testimony given in court include poorly kept mortgage records; a statement given by Farkas, who said, "We at Taylor Bean tend to spend money like drunken sailors";[55] and perhaps most damning was Farkas' reply when informed that TBW owed more than $300 million they were unable to pay: "If you owe someone $100, you have a problem. If you owe them $1 million, they have a problem."[56] This last example can also be used to support behavior that meets the seventh and final criterion—lack of remorse—the hallmark of psychopathy. In court, Judge Leonie Brinkema commented on Farkas' lack of remorse and handed him a 30-year sentence, which was twice that asked for by his attorneys, but significantly less than the possible 378 years for all crimes committed. In his final statement in court, Farkas blamed the government for the mess in the mortgage industry, as it had encouraged home ownership. There are countless other examples that indicate Farkas was either indifferent to or rationalized having "hurt, mistreated, or stolen from another."[57]

Turning now to Hare's checklist and the four primary categories, we can deduce from the public information about Farkas that he would score high on the Affective scale, in which the person lacks remorse and does not accept responsibility. He appeared to have an irresponsible lifestyle and gave the impression of being grandiose and was known to be deceitful. Thus, he would score points on all three of the dimensions for which we have information. The fourth dimension is concerned with antisocial behavior, for which we know little about his temperament as an adult; he has been described as both "charming and charismatic," as

well as "explosive and volatile in temperament," depending with whom one is talking.[58]

Thus, taking both the *DSM-V* and Hare's shortened version of the Psychopathic Checklist, it would appear that Farkas might well meet the criteria under both diagnostic tools. However, we are missing early life information and so are unable to be exact.

Analysis

From his early childhood, it is evident that Farkas was interested in using money as a vehicle to validate his worth as a human. Similar to Rajaratnam, he may also have viewed himself as an underdog in society, despite being a white, male American. As a gay man, raised in the western part of the United States, he may not have been accepted for who he was. His sister's remembrances of him as a child clearly state that he wanted to be respected. His early failures in business undoubtedly spurred him to creativity in the mortgage industry. He used simple techniques to run his scheme, much as Leeson and Kerviel did, essentially taking real documents, altering them, and then sending along a scanned or faxed version. A number of external factors also came together to aid Farkas in his quest for success: the growing population base and the push by the government to enable individuals to buy their own homes; a relaxing of lending requirements fueled the demand for mortgages; lax and uneven oversight by regulators, with financial scandals occurring at both Fannie Mae and Freddie Mac; the move of financial services to the Internet to attract consumers; and the ability to put together a management team that Farkas could control and manipulate without paying exorbitant financial remuneration.

Farkas maintained a high profile within the Ocala and gay communities by throwing parties and donating large sums of money to charities. He learned people's weaknesses and desires and used them to aid his own cause. In this sense, he was a predator, seeking out those he could use and dominate. That Farkas was a master manipulator there is no doubt. He used both his charisma and temper to control people. He, like Rajaratnam, also qualifies as a puppeteer under Babiak and Hare's corporate psychopath nomenclature. In this case, however, there is no justification for cultural misalignment.

The key to maintaining control was employing an organizational cell structure much like that used by terrorist groups. Farkas allowed each of

his executive team access only to snippets of information about what he was doing. It was not until 2002 that Bowman was allowed to see the books and discovered the enormity of the fraud already underway. His anxiety and resignation were more than likely spurred by his understanding of the situation and his own complicity in it; yet he felt helpless to extricate himself from the situation, unlike Moore who left. That Bowman was sentenced to prison and Moore was not indicted suggests that if Bowman had had the nerve to walk away, he too might have escaped punishment for his involvement. Both of the women convicted had believed in Farkas and thought he could make good on his overdrafts. Neither was initially aware of how he had faked documents.

In order to succeed, Farkas needed his CEO to be unaware of how TBW actually functioned, yet he also needed a person who believed in the ability to grow TBW further while possessing the skills to do so. Allen was a perfect match—he had an insider's knowledge of both Fannie Mae and Freddie Mac; he was entrepreneurial, as evidenced by the two companies he had founded, which focused on solving strategic, long-term issues rather than the more mundane day-to-day workings of the business; he used technology to enhance his solutions; and he was comfortable working in a computer-oriented, online environment. Farkas knew what to offer Allen to hook him. Through Allen's expertise in structuring companies and products in the mortgage industry, Farkas was able to take advantage of regulatory lapses in the oversight of mortgage originations, servicing, and resale. By limiting Allen's access to the books in Ocala, Farkas forced Allen to trust Farkas and TBW's accounting firm, Deloitte, as to the validity of the financial statements. As CEO, Allen signed off on financial statements prepared by Deloitte without seeing them. Under the provisions of Sarbanes-Oxley, as CEO Allen was personally liable for any discrepancies or misrepresentations in the financial statements. Given his interest in the big picture and not in the daily workings of the business, he initially seemed to rely on Deloitte to inspect and verify the financials, rather than doing so himself. In hindsight, we can see how Farkas structured his dealings with Allen to take advantage of both Allen's strengths and weaknesses. Why Allen remained after discovering the extent of the problem is a mystery. When asked in court if he regretted staying, he replied, "Oh, gosh, yes."[59] Perhaps he thought he could restructure the company back to health. At Allen's sentencing, US Attorney MacBride noted, "Mr. Allen's sentence reflects his ultimate cooperation with this investigation, but also sends the message that unless executives expose and stop fraud when they first learn of it, they will be punished."[60]

After his conviction, Allen wrote in a personal e-mail to a colleague, "When you and I went through grad school, we said the objective function of the firm was to maximize shareholder value."[61] But in his sentencing, Judge Brinkema told Allen that, as CEO, he was also responsible for "keep[ing] in mind the interests of regulators, creditors, employees, auditors, etc."[62] This discrepancy between what was—and continues to be—taught in the finance classroom (maximizing shareholder wealth) and the charge of Judge Brinkema to consider other interests is problematic. Should corporate financial managers focus only on the self-interests of their corporations (and shareholders), or broaden their focus to include all stakeholders that can potentially be harmed (and benefitted) by the corporation's actions? As CEO, Allen justified his actions in the e-mail: "Clearly, these other parties may not (will probably not) have their incentives aligned with shareholders. Potential conflicts abound with potentially profound impacts on the CEO and his family (see my life)."[63]

To bring in the concept of bearing the consequences of one's actions on other actors changes the game. What makes it especially difficult is if the players are not playing the game by the same rules. At some point, there apparently could become a proclivity to cheat in order to win. Others in the mortgage and finance industry who were involved with manipulating security sales related to the mortgage industry were not pursued at that time. Like Rajaratnam, Allen and Farkas were not part of the inner circle in terms of schooling and social standing. The conviction and sentencing of those involved with TBW sent a message to the public that some financiers associated with contributing to the 2008 financial crisis had been apprehended. Some type of trust could now be reestablished in the market.

Besides ruining the personal and professional lives of those Farkas surrounded himself with at TBW, he also destroyed many others who were involved only circumstantially in his fraud scheme. Colonial Bank failed as a result of having so many of TBW's fake loans on their books. Individuals who had taken out mortgage loans and were making payments found themselves in foreclosure, as there was no record of their having made payments: the money had gone to fund Farkas' increasingly lavish lifestyle. The Ocala community, to which Farkas had so generously donated millions of real dollars created from non-existent loans, lost not only a benefactor, but also an employer who had created well-paying jobs in white-collar positions. The effects of his fraudulent activities were far-reaching, harming many more innocent bystanders than any of the other three financial cases examined, as well as impacting the financial sector itself at a time when it was already weak. Greed is a totally insufficient explanation for Farkas' behavior.

9

Financial Psychopaths Unmasked

In this book, three primary factors that affect the financial environment in which financial professionals operate were identified and discussed in depth to identify financial psychopaths. Culture was the first factor examined. The economic system of the United States is based on the Protestant work ethic: people believed that by working hard, they would be blessed and become rich, thus revealing they would be destined for heaven. In many respects, hard work is the ultimate American value, and it has gradually given birth to a culture dominated by money in the form of capitalism. People who live in the United States and work in the investment finance world receive money-oriented cultural cues on multiple levels, given the intrinsic intertwining of money within the US culture. Traits valued within the investment banking culture mirror many of those required to diagnose psychopathology.

The second factor explored the evolution of humans, as well as money and markets. Humans are biologically hard-wired to respond to threats that would affect either reputation or social status, and men in particular respond aggressively to potential threats to their social status. The findings of St. Gallen researchers found financial traders to be more "reckless and manipulative" than a group of known psychopaths, reinforcing this contention. Money itself has evolved over time. In the past 20 years, money has dematerialized at a rapid rate to the point where it is primarily electronic. The distinction between gaming screens and trading screens has become blurred. No visible connection exists between the numbers displayed on a trading screen and the human lives depending on those dollars, resulting in lost empathy. Financial theories and ensuing models are based on the premise of rational market participants acting in their own best interest, principles that are inherently psychopathic.

Opportunities and the changing composition of employees on Wall Street comprised the final factor. In the 1980s, investment banking houses sought out more young men who were willing to take on risk in order to staff the expanding global operations of the banks. Physicists and mathematicians were recruited to develop complex trading and risk models that would take advantage of the emerging high-speed technologies. Combined, these changes in hiring practices shifted the personality profiles of investment banking houses.

We also discovered that human nature in response to money has changed little over time. Throughout the centuries, individuals have existed who seek ways to acquire wealth that harms others in the process. How these individuals accomplish their goals has been rationalized in multiple ways—everything from making markets more efficient ("I am providing a service to society"), to the more mundane ("Everyone does it, so if I don't then I will lose my 'fill in the blank'—job, status, etc."). It is not just the individuals in finance who are responsible for this situation. The desire to have what others have motivates some, such as Nick Leeson. Individuals who do not have training or interest in finance often want to participate in increases in global wealth as well. Perhaps following a tip from a broker or the advice of a friend or relative who has been successful in the stock market provides the needed introduction into the world of investing.

The question of how much is enough never seems to arise. More is wanted and demanded. For the majority, whatever they have is not enough. American culture promotes the acquisition of things, linking self-worth to the accumulation of specific material goods. Individuals with immense wealth sometimes become involved in more arcane insider-trading schemes to make even more money for no apparent reason other than that they can. Raj Rajaratnam spoke for many when he said that at some point, money is no longer the driver; it is the act of winning that provides satisfaction, which itself may have physiological underpinnings. For others with less access to wealth, becoming involved in schemes may be unintentional at the outset, which was true with Nick Leeson when he first covered the loss for his novice trader. However, extricating oneself becomes increasingly difficult. Perhaps, as in the case of Jérôme Kerviel, there is an unspoken expectation by company management to "stretch" the rules in the quest for increased profitability and bigger bonuses at year-end.

The current wave of labeling people as financial psychopaths appears to be a reaction to the lack of control by people who feel helpless because

they have been harmed by the unthinking actions of those who call themselves financial professionals. The act of labeling individuals who engage in financial schemes to benefit themselves is extreme, given the seriousness of the underlying clinical diagnosis of psychopathy. The label needs be reserved exclusively for those who truly are predators in society, without a conscience with regard to the effect of their actions on others.

In chapter 2, we looked at the education and training of people in the financial world. College courses provide the basis for knowledge of theories that are used to understand how financial instruments work. From these theories, models have been developed to mitigate risk, while at the same time increasing wealth. The flip side of investing is raising capital for corporations to conduct and grow their businesses, which most view as a positive development for society with the accompanying creation of jobs. Once students pass through the halls of academia, they become enveloped in the culture of the firm that hires them, as well as indoctrinated into the financial culture as a whole.

The increase in hiring practices by financial firms of people skilled in mathematics has also increased the volatility in the market. Jérôme Kerviel is one example of a newly minted graduate who was absorbed in his computer models while attempting to game the markets for profit. Mass beta testing of unproven academic models with assumptions that may not align with changing real-world realities in regulation and taxation is suboptimal for society. Even though academic theoreticians—such as Andrew Lo with his evolutionary model of finance and Haim Levy, who has shown that the CAPM holds even within a behavioral finance context—have attempted to move the models of the 1970s into the twenty-first century, those models are still based on a paradigm that was developed more than 30 years ago.

Some universities are starting to respond to this need to change the way students and practitioners alike think about finance and its role within the business world. The idea that liberal arts can inform business thinkers is once again coming into vogue. Universities that are less concerned about catering to young people whose goal is to become rich via the investment banking route are considering "sustainable finance" as the new frontier. Students are being taught how to create value for the long-term and all stakeholders, not just for the wealth maximization of current shareholders—a definite shift from the twentieth-century paradigm. The newly found interest in private equity by recent graduates may be reflective of this change in focus. Whether it will take hold or be confined to a minority of schools remains to be seen. However, given that schools such

as Judge Business School at the University of Cambridge in England are recruiting faculty to work in this area provides a glimmer of hope.

In the aftermath of the financial crisis of 2008, some observers opined that the crisis had provided a great opportunity to shift the role of finance in the world, calling for a change in the attitude of those involved in finance. Interestingly, a prior financial crisis had to be contained in 1890 when, after losing a substantial sum in a speculative international bond dealing, Barings in England had to be bailed out to save the global financial system. This resulted in private banks, Coutts and Barings, among others, reassessing their risk exposure. Coutts decided to become a limited liability company rather than a partnership, as did Barings, indicating that management has an instinct for self-preservation. This awareness of the fragility of the financial system and subsequent restructuring of the institutions to ensure their continued existence is reminiscent of the aftermath of the 2008 crisis originating in the United States.

However, as can be seen throughout millennia, a change in culture is difficult to achieve and sustain. Despite that, there is a slow and steady shift in attitude that is becoming apparent. The rise of impact investing at the institutional level suggests that some firms are seeing a need for a different way to obtain returns for the portfolios they manage. Whether this is being driven by the difficulties in riding out the volatility in the market or because of an inherent desire to improve the world while earning a decent return can be questioned. Many institutional investors of funds acknowledge that their clients on whose behalf they manage money are requesting monies be managed according to responsible investing principles. European firms have spearheaded this change, with their American counterparts slowly joining the movement. The increase in private equity firms and the start of a two-tiered exchange system suggests that investors who are in for the long-haul are seeking opportunities in which the playing field is level and not as technologically driven in terms of speed.

John Bogle, the founder of Vanguard funds, discussed the clash of cultures between investment and speculative factions on Wall Street in his latest book.[1] One point he made was that the division within the mutual fund investment industry has caused a loss in the notion of fiduciary duty, as more fund managers have taken a short-term view and acted speculatively. This may be the time to reconsider the meaning of fiduciary duties. With the trillions of dollars in retirement funds under management needed to support millions of people in the lengthening nonworking portion of their lives, preservation of capital to meet income needs will continue to be a pressing concern for investment managers in

the coming decades. The recent emphasis on near-term returns may not be an appropriate approach for managing this wealth. Furthermore, the short-term view is narcissistic in nature, concerned only with the individual maximizing his or her own returns and ignoring the ramifications of those actions on society at large. There is a need to become more conscious that resources are finite. If those resources are used up, then future generations will have to focus their energy and talents on coping with the fallout, instead of focusing on new ideas that could move society forward for the benefit of all.

There is also a deep divide between technologically zippy traders seeking immediate returns and long-term investors, who focus on preservation of capital for extended generations. The globally connected financial markets are no longer able to meet the needs of both within the same forum. Confirming the observations made in chapter 4 that the evolution in markets has not been beneficial for all market participants, Jeff Sprecher, head of the Intercontinental Exchange (ICE), which bought NYSE Euronext, commented that the market structure today "takes advantage of people that have to trade or have poorer information."[2] He further noted that it is not a sustainable configuration. Sprecher believes that "[m]arkets need a human touch."[3] Although Sprecher may be thinking of this from a practical business perspective, his view coincides with the premise made in these pages that part of the problem surrounding money in today's society is the lack of connection between humans and money.

The money complex described in chapter 3 as being comprised of "resources of the Self available to the ego" comes into play here. People are less attached emotionally than in the past, due in part to changes in the structure of society. There is a poverty stemming from lack of connection to an individual's inner resources that are represented by his or her outer money-related resources, which are now in the form of binary code. An inadequate father figure, represented by the government, has replaced the former bountiful mother, who gave natural resources with which wealth could be displayed. This woefully inadequate father is subservient to corporations. The former relational aspect of money has all but disappeared in the broader economy and has been replaced by "spirit" money, which is easier to move around and manipulate. As a result, it has become difficult for individuals to grasp exactly what resources they now possess. From the pure psychopathic perspective, this represents an excellent opportunity to separate people from their money and to become financially successful. Financial professionals who are not psychopathic

by nature often have to adopt psychopathic traits to adapt to the evolving markets if they want to succeed.

While in the financial district of a big city, I observed a well-dressed man, who more than likely worked in the financial industry, walking across a three-lane one-way road and crossing against the light. He waited for the first of three cars to pass before stepping onto the roadway, and then started across. The third car was in the far lane and traveling at such a speed that they would have collided if one did not give way. The man walking did not slow down, stop, or speed up—he just kept moving at the same pace. The car was forced to stop to avoid hitting the man. And then the light changed. The driver was obviously annoyed and made the decision to run the light and turn in front of another car, which had the right of way. There had been a ripple effect from the man walking across the road, concerned only with his own progress, not seeing or perhaps not caring how his actions carried on to other factors in the environment around him. Some may see the man as winning: he made it across the street on his terms, beating the cars. However, this man's attitude could also be construed as narcissistic or even psychopathic. It is an evocative image of how financial professionals are perceived to be carrying out their tasks and responsibilities, with an apparent air of disregard and disconnection.

Rather than thinking of people in the finance industry as psychopathic, it may be more appropriate and productive to acknowledge that certain sectors in society specifically involved with money and power are more prone to attract people who desire both, and they are willing to obtain them at the expense of others in society. We have seen that the theories of finance can wreak havoc in practice if taken to heart without thinking of society as a whole. As more students obtain baccalaureates in business or complete MBAs, the acceptability of maximizing shareholder wealth as a credo has become more widespread. After all, following this dictate, those who have a stake in a given corporation benefit and those who do not lose out. On one level it seems fair and rational—if you are not willing to take the risk, why should you benefit? However, as technology has crept into the picture, it has also opened the door to people who are speculators at heart, gamblers, in essence. Having been given carte blanche to act in the best interest of the individual, speculators with narcissistic tendencies can emerge, much to the detriment of society as a whole. In addition, if a person has addictive tendencies in his or her personality structure, interfacing with computer screens all day may bring out latent gambling proclivities.

Con men have existed throughout the ages and continue to exist in modern-day society. For some it is a game; for others, being able to support their family depends on it. As an extreme example, it is worthwhile to consider whether the financiers of the Somali pirates are financial psychopaths. They have used others to further their agenda, and seemingly without conscience. The cultural dimensions of the situation cannot be ignored, as their actions have directly and indirectly affected people and businesses around the globe. According to a newly released study conducted by the World Bank, United Nations Office of Drugs and Crime, and Interpol, the increased costs associated with the piracy amount to $18 billion each year[4]—a significantly larger sum than the total of $339 to $413 million taken in total as ransom over the seven-year period from 2005 to 2012. Is this a case of "us" (marginalized people with few available resources) versus "them" (wealthy developed-country traders using our waters to transport their goods globally to other wealthy developed-country consumers)? Or is it an updated version of Robin Hood, taking from the rich to give to the poor? The Word Bank report explained that the taking and holding of merchant ships as hostages to obtain ransom money is run as a business; the inference being that it is run rationally to maximize the wealth of the owners—the same principle on which Wall Street firms and corporations are managed.

American culture condemns con men and at the same time condones behaviors in certain circumstances that allow individuals to take financial advantage of others. Only when it becomes evident on a large scale and when enough people have been damaged does it become unacceptable. The labeling of people who have been caught engaging in practices that have hurt hundreds of thousands and even millions of other people as financial psychopaths is recent. But pathologizing the people as psychopaths who have swindled, conned, and defrauded the masses in the latest financial crisis separates "us" from "them." From the perspective of those who were damaged and did not gain financially from the crisis, the people who were not hurt and did gain financially *are* financial psychopaths, given their behavior and seeming lack of remorse. This labeling allows society to place blame on those who wreaked financial havoc, whether they actually are psychopaths, further providing a defining distinction between the two groups. Perhaps the time has come for a new nomenclature to identify the non-clinically aberrant financial professionals who unwittingly participate in harming innocent bystanders, reserving the term *financial psychopath* for those who are physiologically

and psychologically incapable of carrying out the fiduciary responsibilities required of a financial professional.

In terms of socioeconomics, the influx of people from less privileged backgrounds entering the investment banking world, spurred by the desire of the old guard to increase their own wealth, brought public attention to how this wealth was being created, as demonstrated by the cases of Nick Leeson and Jérôme Kerviel. People from less privileged backgrounds are more likely to be sentenced and admonished publicly than their more privileged counterparts. Castigating people as financial psychopaths further separates them, making them appear to be more deviant and hence deserving of public disdain. Regulators of all markets are finding it difficult to keep up and consequently are working furiously to plug only the worst holes in the system, catching the most blatant offenders and allowing the rest a free pass. Knowing that psychopaths represent only a small portion of the population, if a few people are convicted and labeled as such, the general populous might be satisfied that the worst offenders have been removed from society. However, those who really are financial psychopaths will go back to business as usual, having sacrificed expendable employees and colleagues. As we saw in earlier chapters, those who best fit the psychopathic profile are difficult to detect before they cause damage and even less likely to be caught and sentenced, even if their actions were financially devastating to others around them. The case of the former CEO of Sunbeam Corporation, Al Dunlap, underscores this point.

The small sample of people whose lives and behaviors we examined in the last two chapters showed that multiple factors come into play when trying to identify someone as a financial psychopath. Those who are have the wiles to remain hidden and out of sight. Lee Farkas had attempted to swindle people through business ventures several times. It was not until he found the right combination within the financial industry that he became successful at financial exploitation. If TBW had not become legally aligned with Colonial Bank in Farkas' attempt to get even more "free" money from the government under TARP, his scheme would have lasted longer and caused even more damage than it did. The culture of the financial industry condones and rewards behaviors that are not socially optimal. It abets individuals who have the skills and traits to participate in gaming a system that has become more integrated, faster, and technologically connected worldwide. Hackers and scammers prey on the very systems that the financial industry has instituted to aid their own transactional dealings. The average law-abiding person loses the most in the game.

Computers and technology have played a major role in the ability to take people's money and on a much larger scale than has been possible in the past. Of the people considered in this book, only Raj Rajaratnam actually based his scheme on relational interactions with people. It was a decidedly low-tech approach and did not require the creation of fake accounts. He was enormously successful from a financial perspective, thanks to his well-honed strategy. Rajaratnam's personality has many hallmarks of a psychopathic personality, but not all. His cultural background also has shaped his views on morality and ethics, which are not mainstream views in America.

Nick Leeson made actual trades that lost money and used a bogus account to record the losses and keep track of what he did. Leeson personally profited directly from his successes, while his failure affected more people on a greater scale than he had benefited from in any of his prior successes. He was driven by his desire to be someone great; the quality of wanting to be more combined with his narcissistic personality led him into the high-risk arena of derivatives trading, despite not having a formal education in finance or connections at any of the investment banking houses.

Jérôme Kerviel's method of operating appears to have been modeled after Leeson's, but using more sophisticated techniques. Kerviel, in contrast to Leeson, did not benefit directly from his derivative strategies, which earned Société Générale hundreds of millions. His star trading status did not further his ambitions to climb higher up the ladder of success. Kerviel's final strategies, which left Société Générale so exposed in the market, had the potential to affect the global financial system, not just the investment bank itself, coming when it did at a precarious time in global economic history. The gains that Kerviel made while trading are far outweighed by the unthinkable losses that might have occurred had Bouton not stepped in to avert the disaster. Each rogue trader acted alone, motivated by personal objectives that were not intended to bring others into the game.

The most egregious case we examined was Lee Farkas. He purposefully set up TBW to take advantage of the Internet. By using real people who applied online for real mortgage loans, he was able to set up templates, enabling him to create more "loans" as needed by simply altering data and maintaining electronic records. He did need the help of a select few, some of whom knowingly assisted him in the fraudulent scheme. He chose his team based on their inability to stand up to him and ease of control. Others, who were unaware of the true intent of Farkas' dealings, were necessary to provide financial sophistication and respectability to the endeavor.

Summary

The confluence of cultural changes and practices in the United States, investment banking, and globalization, in concert with evolving money, markets, and inherent biological tendencies have promulgated an environment conducive to and rewarding of psychopathic pathology. These environment-induced behaviors, once made known, can be rectified and in turn will reduce the occurrence of such behaviors by nonpsychopathic individuals. However, changing deeply ingrained societal and cultural patterns is inherently difficult, requiring both time and commitment to be effective and sustaining.

Looking to the future, we have seen that changes are slowly taking place. People are beginning to examine the culture of the universe of finance and how that might be contributing to the problematic behaviors observed. Researchers are focusing on what has happened and continues to happen within the finance profession. Psychologists, sociologists, anthropologists, and economists, as well as financial researchers, are all busy conducting field work, running experiments, observing, and analyzing the men and women who are connected to Wall Street. Some former Wall Street professionals are sharing their experiences with the general public, breaking the wall of silence that has surrounded the inner workings of the industry and potentially helping to remove the cultural projections that have been placed on the profession.

With this outside scrutiny on financial professionals, the possibility of some cultural shifting may take place in due course. The gender imbalance is receiving more attention, given the differences in how men and women approach and solve problems. More women in the financial universe would radically shift the probability of a psychopath being present. Business schools are incorporating more aspects of liberal arts into their curricula, broadening the focus of education. The emphasis in finance will need to shift to support the emerging fields of sustainable finance and impact investing in order to create and reinforce the necessary paradigm shift. A focus on the long-term aspect of investing needs to be reinstated, with people who can be trusted over the long-term and supported to carry out their duty to manage intergenerational funds.

Psychopathic individuals have been present in financial occupations throughout the centuries. The general financial work environment is well suited to psychopathic traits. By their very nature, financial psychopaths are difficult to identify until the results of their actions have already caused suffering to others. They inflict a disproportionate amount of

financial damage that is both publically observable and more that is not. Advances in brain scanning have made it possible to more accurately distinguish psychopathic neural abnormalities, but it is invasive in nature and raises ethical questions.

The "us" versus "them" division that became apparent after the 2008 financial crisis has resulted in financial professionals being viewed in a critical light. People outside the financial industry feel betrayed by those within the industry whom they trusted to steward their financial assets. This breach of trust in turn has led to the subsequent labeling of individuals who financially damaged other people as financial psychopaths, regardless of whether a person meets the measure of a true psychopath.

Notes

Chapter 2

1. Which initially included savings and loan institutions, as well as commercial banking.
2. Securities and Exchange Commission. (2003).
3. E. Javers. (2013).
4. Bruno Solnik. (1974). Why not diversify internationally rather than domestically? *Financial Analysts Journal* was the first in a number of papers published in different journals in both the United States and Europe.
5. E. G. McGoun et al. (2002).
6. Goldman Sachs recently announced plans to stop their two-year program, citing increasing defections to private equity companies upon completion of the training. T. Braithwaite, (2013). Goldman's has also moved some of their back-office operations, including training of analysts to Salt Lake City, Utah, reducing their costs.
7. L. Baertlein. (2010).
8. Information about the history of Burger King is from the company website.
9. D. McCann. (2013).

Chapter 3

1. R. Benedict. (1934), pp. 2–3.
2. J. Henderson. (2004), p. 19.
3. J. D. Rockefeller. (1905). Quoted in P. Collier and D. Horowitz, (1976).
4. C. Rapaille. (2007), p. 124.
5. The Giving Pledge. (2013).
6. Pew Research Center. (2007), p. 12.
7. Clotaire Rapaille argues that when it comes to money, even rich Americans think like poor people due to the immigrate status of most Americans. He believes that money in America represents proof of being of value as a person. pp. 121–124.
8. Ibid., p. 122.

9. C. G. Jung. (1964/1978), CW 10, para. 928.
10. R. I. Simon. (2008), p. 39.
11. Koenigs et al. (2010).
12. M. Lewis. (1989), p. 9.
13. Ibid., p. 61.
14. T. Duff. (2013). This section draws on Turney Duff's book to provide a view of culture through the eyes of a buy-side trader.
15. T. Duff. (2013), p. 104.
16. Ibid., p. 114.
17. T. Duff. (2013), p. 137.
18. R. Benedict. (1934), p. 3.
19. K. Ho. (2009), p. 179.
20. Ibid., p. 179.
21. Ibid., p. 186.
22. Ibid., p. 186.
23. H. Lucas, Jr. (2012), pp. 420–443.
24. A. R. Sorkin. (2007); M. Schuster. (2009); C. H. Ferguson. (2011).
25. *Journal of the American Medical Association.* (1990). Comorbidity study of psychopathy and addiction estimated that 75 percent of psychopaths are addicted to alcohol, and 50 percent are addicted to cocaine.
26. M. Stout. (2005), pp. 186–187.
27. R. Goldstein and N. D. Volkow. (2002).
28. R. Goldstein et al. (2003).
29. R. D. Rogers and T. W. Robbins. (2001).
30. J. Gapper. (2012).
31. N. Shover and A. Hochstetler. (2006), p. 3.
32. Ibid., p. 55.
33. J. Uribarri. (2013).
34. Daily Mail. (2013).
35. G. Hofstede. (2000).
36. D. Winchie and D. Carment. (1989).
37. M. Stout. (2005).
38. R. J. Smith. (1978).
39. G. Hofstede. (2000), p. 215.
40. D. J. Cooke and C. Michie. (1999).
41. J. R. Haule. (2011); R. Nash. (2001); W. Cronon. (1996); M. Oelschlaeger. (1991).
42. M. Stout. (2005), p. 137.
43. D. J. Cooke. (1998).
44. R. D. Hare et al. (2000).
45. D. J. Cooke et al. (2005).
46. A. Mokros et al. (2010).
47. B. Nikiforova and D. W. Gregory. (2013).

48. R. D. Hare. (1993), p. 177.
49. S. H. Konrath, E. H. O'Brien, and C. Hsing. (2011).
50. J. M. Twenge et al. (2008).
51. D. L. Smith. (2012).
52. Ibid., p. 220.
53. Ibid., pp. 220–221.

Chapter 4

1. *American Heritage Dictionary.* (2004).
2. R. von Glahn. (2005), p. 65.
3. Ibid., p. 6.
4. Ibid., p. 66.
5. R. Hof. (2006).
6. Bitcoins are created or "mined" through the use of computers that solve mathematical algorithms. Once created, they are stored in digital form and can be bought and sold.
7. K. Gotthold and D. Eckert. (2013).
8. B. McLannahan. (2014).
9. IRS. (2014).
10. M. Warburton. (2014).
11. NYSE/Euronext.
12. R. Michie. (2001), p. 31.
13. Ibid., p. 15.
14. Ibid., p. 31.
15. Ibid., p. 31.
16. Braithwaite in R. Michie. (1999), p. 371.
17. G. Clark and D. Wójcik. (2001); D. Wójcik. (2013).
18. J. Creswell. (2010).
19. Ibid.
20. Scott Redler, chief strategic officer at T3 Capital Management, quoted in an article by T. Lauricella. (2010).
21. A. Sharp and E. Rocha. (2013).
22. E. Lam and K. Dmitrieva. (2013).
23. M. de la Merced. (2013).
24. H. M. Markowitz. (1952), pp. 77–91 and H. M. Markowitz. (1959).
25. E. J. Sullivan. (2006), pp. 207–210.
26. E. Fama. (1968), pp. 29–40.
27. A. Lo. (2005), pp. 21–44.
28. D. Kahneman and A. Tversky. (1979), pp. 263–292.
29. D. Kahneman. (2011).
30. H. Levy. (2010), pp. 43–71.

Chapter 5

1. A. Einstein. (1917), p. 110.
2. M. Lewis. (1989), p. 10.
3. S. J. Blakemore and S. Choudhury. (2006).
4. These descriptions are condensed. Reading Jung's original work about type or any of the numerous books relating to the Myers-Briggs test will provide greater detail.
5. J. Rogers et al. (2006), p. 1789.
6. Ibid., p. 1796.
7. H. Asperger in Frith. (1944/1991), p. 37.
8. Ibid., p. 37.
9. Ibid., p. 37.
10. Ibid., p. 80.
11. Ibid., p. 80.
12. Ibid., p. 81.
13. Ibid., p. 73.
14. Ibid., p. 76.
15. P. Howlin. (2000a, 2000b, 2003). F. W. Larsen and S. E. Mouridsen. (1997).
16. Asperger in Frith. (1991), p. 88.
17. Frith, p. 4.
18. Ibid., p. 21.
19. D. Tantum. (1991), p. 177.
20. *BBC News.* (22 May 2013).
21. M. Lewis. (1989), p. 16.
22. D. K. Belyaev. (1979).
23. D. W. Gregory and B. Nikiforova. (2012).
24. E. Goodwyn. (2012).
25. D. L. Smith. (2004).
26. N. Shover and A. Hochstetler. (2006).
27. A. Gibney. (2005).

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1. R. I. Simon. (2008).
2. K. Dutton. (2012).
3. J. M. Murphy. (1976), pp. 1019–1028.
4. L. Houlcroft, M. Bore, and D. Munro. (2012), pp. 274–278.
5. M. E. Rice, G. T. Harris, and C. A. Cormier. (1992), pp. 399–412.
6. J. Rogers, E. Viding, R. J. Blair, U. Frith, and F. Harpe. (2006), pp. 1789–1798.
7. *DSM-V*. (2013). Primary diagnostic criteria for Antisocial Personality Disorder, which is grouped under Cluster B Personality Disorders.
8. R. I. Simon. (2008), p. 34.

9. D. Henriques. (2011).
10. K. Dutton. (2012), p. 112.
11. Paul Babiak website.
12. P. Babiak and R. D. Hare. (2006).
13. Ibid., p. 19.
14. Ibid., p. 19.
15. H. Cleckley. (1941); P. Babiak and R. D. Hare. (2006); R. I. Simon. (2008); P. Brown. (2010).
16. R. I. Simon. (2008), p. 36.
17. R. D. Hare. (1993); *DSM-V.* (2013), p. 661.
18. For examples, see papers by Elham Forouzan and David J. Cooke. (2005); Mette K. Kreis and David J. Cooke. (2011); and Rolf Wynn, Marita H. Høiseth, and Gunn Pettersen. (2012).
19. M. K. F. Kreis and D. J. Cooke. (2011), pp. 634–648.
20. N. R. Crick and J. K. Grotpeter. (1995), pp. 710–722.
21. E. Forouzan and D. J. Cooke. (2005), pp. 765–778.
22. D. Thornton and L. Blud. (2007) in H. Herve and J. C. Yuille, editors, pp. 505–539.
23. E. Forouzan and D. J. Cooke. (2005), pp. 765–778.
24. N. McWilliams. (2011), p. 158.
25. Ibid., p. 163.
26. M. Ainsworth et al. (1978); J. Green and R. Goldwyn. (2002); G. Bohlin, L. Eninger, K. D. Brocki, and L. B. Thorell. (2012).
27. M. Stout. (2005), p. 133.
28. For an overview see R. J. Davidson et al. (2000).
29. K. A. Kiehl et al. (2001).
30. M. Koenigs, M. Kruepke, and J. P. Newman. (2010), pp. 2198–2204.
31. J. C. Motzkin, J. P. Newman, K. A. Kiehl, and M. Koenigs. (2011), pp. 17348–17357.
32. R. I. Simon. (2008).
33. A. Glenn, A. Raine, R. A. Schug, L. Young, and M. Hauser. (2010), p. 910.
34. M. Stout. (2005).
35. C. Roessler. (2012), pp. 223–246.
36. S. Williamson, T. J. Harpur, and R. D. Hare. (1991), pp. 260–273.
37. In Jon Ronson. (2011), p. 110.
38. P. Babiak and R. D. Hare. (2006).
39. R. J. R. Blair. (2005)a, pp. 865–891.
40. Ibid., p. 885.
41. R. D. Rogers and T. W. Robbins. (2001), pp. 250–257.
42. *DSM-V*. (2013), p. 663.
43. Ibid., p. 663.
44. *Chicago Tribune.* (November 14, 2013). Whitey Bulger sentence: Former Boston mob boss gets two life terms. Accessed at http://www.chicagotribune.

com/news/chi-whitey-bulger-sentence-20131114,0,443896.story on November 14, 2013.

45. A. Semuels. (2013).
46. Biography.com. (2014).
47. R. D. Hare. (1993); P. Babiak and R. D. Hare. (2006); M. Stout. (2005); R. J. Smith. (1978).
48. R. D. Hare. (1993).
49. Ibid., p. 108.
50. C. Boddy. (2010), pp. 300–312.
51. R. D. Hare. (1993), p. 104.
52. P. Babiak and R. D. Hare. (2006).
53. J. Ronson. (2011), p. 161.
54. Ibid., p. 157.
55. U.S. Securities and Exchange Commission. Litigation Release No. 17710/ September 4, 2002.
56. B. Board and K. Fritzon. (2005), pp. 17–32.
57. R. I. Simon. (2008).
58. See also P. Babiak and R. D. Hare (2006) and R. J. Smith (1978).
59. T. Philippon and A. Reshef. (2012), pp. 1551–1609.

Chapter 7

1. S. DeCovny, (2012), p. 35.
2. The information about Nick Leeson's background has been drawn from publicly available information including information posted on Leeson's website, his book *Rogue Trader,* (1996) and Judith H. Rawnsley's book about Leeson and the role he played in bringing down Barings.
3. Information about the history of Coutts is drawn from Coutts' website.
4. More detailed information about the history of Barings has been made available by ING, which subsequently bought Barings. Their website, riskandreward.org, includes archived information from Barings.
5. The Baring Archive. *A brief history of Barings.*
6. N. Leeson, short biography.
7. J. Rawnsley., (1995), p. 169.
8. American Psychiatric Association. (2013), p. 659.
9. N. Leeson, short biography.
10. Ibid.
11. Ibid.
12. Ibid.
13. C. Matlack. (2008).
14. J. Stewart. (2008), pp. 54–65.
15. Ibid.
16. Ibid.

17. The information about Jérôme Kerviel's background has been drawn from publicly available information including James B. Stewart, (2008); Peter Gumbel, (2008); Carol Matlack, (2008) and "Jérôme Kerviel," (2011), *Gale Biography in Context*.
18. J. Stewart. (2008), pp. 54–65.
19. N. Allen and H. Samuel. (2008).
20. P. Gumbel. (2008), pp. 106–114.
21. J. Stewart. (2008).
22. P. Gumbel. (2008), pp. 106–114.
23. Ibid.
24. J. Stewart. (2008).
25. N. Clark. (2012), p. B4(L).
26. Ibid.
27. C. Matlack. (2008).
28. American Psychiatric Association. (2013), p. 659.
29. C. Matlack. (2008).
30. Studies by J. M. Coates and J. Herbert, (2008), pp. 6167–6172 and P. Sapienza, L. Zingales, and D. Maestripieri, (2009), pp. 15268–15273.
31. J. Stewart. (2008).
32. "Jérôme Kerviel." (2011). *Gale Biography in Context*.

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3. Anita Raghavan. (2013), p. 107.
4. Ibid., p. 87.
5. Ibid., p. 88.
6. Ibid., p. 89.
7. Ibid., p. 89.
8. Ibid., p. 89.
9. A. Raghavan. (2010), pp. 118–123.
10. Ibid.
11. A. Raghavan. (2013), p. 92.
12. American Psychiatric Association. (2013), p. 659.
13. Ibid.
14. A. Raghavan. (2013), p. 87.
15. S. Mehta. (2011), pp. 46–51.
16. A. Raghavan. (2013), p. 111.

17. A. Raghavan. (2010), pp. 118–123.
18. A. Ahmed. (2011).
19. Ibid.
20. S. Mehta. (2011), pp. 46–51.
21. Ibid.
22. Ibid.
23. Ibid.
24. Ibid.
25. J. Bandler. (2010), pp. 66–80.
26. Background information about Lee Farkas has been drawn from various editions of the *Ocala Star Banner*, which reported on the trials related to TBW, as well as the television program, *American Greed*, which highlighted TBW in one of its episodes.
27. *American Greed.*
28. Ibid., 6:43.
29. Ibid.
30. Fannie Mae silence on Taylor Bean led to $3B fraud. *CFO World.*
31. Ibid.
32. Associated Press. (2008).
33. Ibid.
34. Ibid.
35. LinkedIn. Retrieved August 2013.
36. *American Greed,* 16:15.
37. Ibid., 23:31.
38. L. Douglas-Brown. (2010).
39. *American Greed,* 31:52.
40. Ibid., 32:10.
41. *American Greed.*
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44. US Department of Justice. (2011). Former president of TBW pleads guilty to fraud scheme.
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48. Ibid.
49. *Ocala Star Banner,* March 6, 2012.
50. *Daily Bankruptcy Review,* April 5, 2011.
51. Ibid.
52. *Ocala Star Banner,* April 10, 2011.
53. Ibid., April 12, 2011

54. American Psychiatric Association. (2013), p. 659.
55. *Ocala Star Banner*, April 10, 2011.
56. Ibid.
57. American Psychiatric Association. (2013), p. 659.
58. *Ocala Star Banner,* April 3, 2011.
59. Ibid., April 12, 2011.
60. Ibid.
61. Personal e-mail to colleague.
62. US Department of Justice. (2011). Former TBW CEO sentenced to 40 months in prison for fraud scheme.
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