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Psychology of Investing

How Knowledge of Behavioural Finance Underlies Suitability and Investment Recommendations

OLIVER'S LEARNING

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General Introduction

- How often over the course of a long client relationship characterized by multiple transactions will an advisor think "Now, why would my client do ***that***?"

- A sense of frustration can be precipitated by a situation in which the advisor feels that he or she has come to know the client via the standard, accepted methods of Know Your Client forms and annual reviews.

- The advisor can see a clear contradiction between the client's verbal ("I am not too comfortable with losses.") behaviour and overt ("I want to put my entire portfolio into that new IPO") behaviour. The client's overt behaviour could be inconsistent with his or her income, future needs, or risk tolerance, as stated on the KYC form – according to what the client has said, it is not how he or she *ought* to be acting.

- The reality of the advisor/client relationship is that, despite the hard work and expertise the advisor invests in the client by preparing recommendations for buying, for selling, for types of investments, and for the length of time they should be held based on the KYC, at the end of the day, it is the investor who makes the decisions that underlie instructions.

- Those decisions are all about money, and money is one of the most emotionally sensitive products: it is feared, coveted, loved, and hated.

- Money is also "smart"; it can be managed, made to grow, and used as a tool to achieve financial objectives.

- The investment advisor faces the challenging task of tackling the practical issues around money while dealing with the psychological profile of the investor to whom it belongs and that person's capacity for decision-making.

- It is imperative for recommendations of suitability that the investment advisor recognizes the psychological motivations of the investor and takes them into account. What drives the client to insist on buying a stock with a proven record of underperformance? Why does the client invest so much of her pension savings in the company she works for? Why will a client insist on selling at the least opportune moment? Why does a client not act? Why does a client not listen? All these actions are evidence of psychology at work.

- Combine the actions of an individual investor with the reaction of the markets to the decisions made by investors –up 300 points one day and down 250 the next, up on Fridays and down on Mondays, up in the spring and down in the fall – and the advisor should begin to sense the pervasive role psychology plays in investing.

- Finally, the investment advisor has his or her own psychological makeup to consider and how it may affect behaviour with clients and the recommendations that are made. The advisor may have noted in himself a predisposition to certain companies, industries or products, an instinct to hold when all research indicates to sell, aggravation when an investor queries advice, or unfounded optimism. These will be evidence of the advisor's own psychological profile entering the stew of biases that this course explores.

- Completion of this course will illustrate to employers, clients, and regulators that the investment advisor takes the role of ***advisor*** seriously. More than simply having a knowledge of products, the *Psychology of Investing* takes Know Your Client to a deeper level, where the real motivations that drive client action and inaction occur and decisions may be made for reasons of which even the client is unaware.

Introduction

> Interview with David Chilton, author of *The Wealthy Barber*, November 21, 2007, in the *Globe and Mail* Investor Magazine.
>
> **Interviewer:** If you were to tack another chapter onto *The Wealthy Barber*, what would it be about? . . .
>
> **Chilton:** I would probably talk more about the psychology of money and why so many people make the same mistakes over and over again, how we are almost from a DNA perspective destined not to handle money well. In fact, our whole investment decision-making process is flawed. The more we can understand that, the better off we'll be.

- The effect of psychology on investing is not new. Scottish moral philosopher, Adam Smith (1723-1790) and economist John Maynard Keynes (1883-1946) (among others) famously dealt with irrationality but in the post-war boom years of the 1940s, economic theory was taken over by rationalists.

- Seeing the market as rational made it easier to use the mathematical models that were being applied widely to economics at the time.

- Economists held that:

  - people were rational;
  - therefore they would prefer and choose options that would serve their purposes best;
  - these preferences and choices would be based on a logical assessment of all available evidence;
  - they would be consistent in these choices.

- This thinking resulted in the "efficient markets theory" (EMT), which dominated economics from the 1940s into the 1980s, and is cited to this day as a theory to explain stock market behaviour.

- EMT proposed that foolish investors exist and they are eventually driven out of the market by rational investors, who profit by the mistakes of the foolish.

- In the 1970s, some economists began to challenge the idea of the rational market, looking to psychology to explain the actions of investors who seemed to act against their own self-interest.

- Some pioneers in the field include Daniel Kahneman (Princeton, and winner of a Nobel Prize); Amos Tversky (often cited as the forefather of the field; died in 1996); Meir Statman (Santa Clara); Richard Thaler (University of Chicago); and Robert J. Shiller (Yale). All have published widely on their studies of how to understand and explain how psychology influences the decision-making process of an investor and the movement of the markets.

- Kahneman and Tversky originally described something called “Prospect Theory,” which found that people placed different weights on gains and losses and on various ranges of probability – in contrast to the efficient market theory. They are definitely more sensitive to losses than to gains.

- The fact that macroeconomic policies in the 1980s did not seem to be effective and the “crash” of October 1987, which seemed to have no obvious causes, focussed new attention on behavioural finance rather than efficient-market theory.

- Behavioral finance focussed on how human emotions caused anomalies in the markets. History provided useful lessons such as the herd mentality that underlay Tulipmania in the 17th century in which the entire nation of the Netherlands participated in buying and selling tulip bulbs and people of all social strata made and lost fortunes based on how highly bulbs were coveted. More recently the technology bubble was evidence of how dreams superceded reality.

- This course is not going to look at the application of behavioral finance in the larger economic picture and movement of markets (macroeconomics) – that will be dealt will in its sister course, *Market Behaviour*.

- This course will apply the lessons of psychology to the reactions of the client and the relationship between the client and the advisor. This “microeconomic” approach is more accurately called simply the *Psychology of Investing*.

Chapter 1

Know Your Client and Its Psychological Context

- Know Your Client is at the heart of the fiduciary duty that the agent or advisor owes to the client because it has been considered essential to giving a client suitable financial advice, tailored to that client's financial objectives and risk tolerance.

- To do this, the advisor must do his or her best to learn as much about the client as possible including acquainting himself or herself not only with the factual circumstances of the client's life, but with any concerns, attitudes, and emotional or intellectual biases that might affect how the client approaches financial issues.

- Most advisors have KYC or KYC-type forms to fill out when they first meet the client

- This is a good beginning, but forms are often too general or vague – and people both asking the questions and answering those questions frequently interpret words or meanings differently.

- There is no substitute for getting to know the client in person in order to understand what makes the person "tick," including his or her psychological profile.

Ways in Which the Psychology of Investing Can Help the Advisor

- A familiarity with the psychology of investing will help the advisor to better understand a client and that client's investing personality. Therefore, it can be seen as a further level of KYC.

- Simply by making the advisor aware of biases and differences in clients' investing personalities, knowledge of the psychology of investing will help them serve their clients better:

    – in the asset allocation they recommend;

- in the factors they address;
- in the manner in which they explain the recommendations they make;
- in building a sustained relationship with the client.

- Awareness of the particular psychology of the client will help the advisor adjust the risk and return of a portfolio according to the client's needs and tendencies. For instance, can the client afford a slightly underperforming investment that stays in his or her comfort zone, or do practical necessities suggest that the client should be encouraged to embrace increased risk for better returns?

- The ideal solution is an efficient allocation that meets the client's needs while allowing him or her to be at ease psychologically.

- Knowing the investor's money personality and his or her motives and fears around money also helps the advisor to manage the client's expectations.

- To establish a common, shared frame of reference, the asset allocation that the advisor recommends and discusses with the client – and to which the client agrees – should be confirmed in writing as an investment policy statement.

- In addition, the effort and attentiveness that an advisor has to put into determining a client's investment psychology helps in developing a strong bond in the relationship between client and advisor.

- It pays the advisor to bear in mind that people tend to be influenced most by those they trust.

> In an investmentadvisor.com article of July 2005, entitled "All in Your Head," Chris Blunt, VP of New York Life Investment Management, is quoted as saying,
>
> "If you actually believe that the individual investor is driven more by psychology than economics, then the financial advisors, the really good ones, are much more managers of client behaviour than economists.
> "Good financial advisors often earn their pay through the things that they help their clients not to do."

Chapter 2

Models Of Client Investing Personalities

- Just as economics encompasses studies of macroeconomics (economic issues on a large scale) and microeconomics (small-scale economic issues) so too does behavioural finance examine the psychology of the investor by typographies that identify the broad-stroke nature of personality types and then by biases that can exist within the personality.

- Psychologist Jonathan Myers feels that profiling models will soon be used as a matter of course in brokerage firms because profiling and typographies help the advisor to pinpoint problems in a client's investment style (such as frequent trading, being unable to cut losses, etc.).

- They can also provide a framework within which to discuss problems and tailor investment advice to a receptive client.

- Profiling models are a useful addition to more traditional methods of advising clients. They include:

  - The Barnewall Two-Way Model
  - The Bailard, Biehl, and Kaiser (BBK) Five-Way Model
  - The Life Cycle Investing Model
  - The Nine Money Personalities©
  - The Psychometric Investor Profiler

- Following this review of personality models we will explore the psychological biases found within the types of personalities.

The Barnewall Two-Way Model

- This model, developed in 1987 by Marilyn MacGruder Barnewall, classifies investors as "active" or "passive."

Active Investors

- tend to have earned their own wealth, often considerable;
- have taken risks when amassing wealth, so more comfortable with risks in investing;
- don't put too much stress on security;
- are likely to be contrarian investors;
- don't need to be diversified;
- have a great need for control;
- maintain considerable involvement in their investments (which can irritate advisors, as they question every decision) and can think they know more than their advisors;
- become less tolerant of risk if they feel out of control;
- tend to be: people who have built their own small (or large) businesses; professionals who are in business for themselves; entrepreneurs, surgeons;
- may mellow with age and become more open to an advisor's suggestions.

Passive Investors

- have attained their wealth passively (by inheritance, by investing the money of others, or by pursuing a stable professional career);
- feel security is more important than taking risks to increase returns;
- want to hang on to their money;
- tend towards diversified portfolios of stocks in quality investment products;
- are likely to trust their advisors and are willing to delegate the running of their affairs to them;
- are unlikely to be contrarian investors, and need to move with others (follow the herd);

- overestimate the risk of investments, and are therefore likely to miss out on better returns;

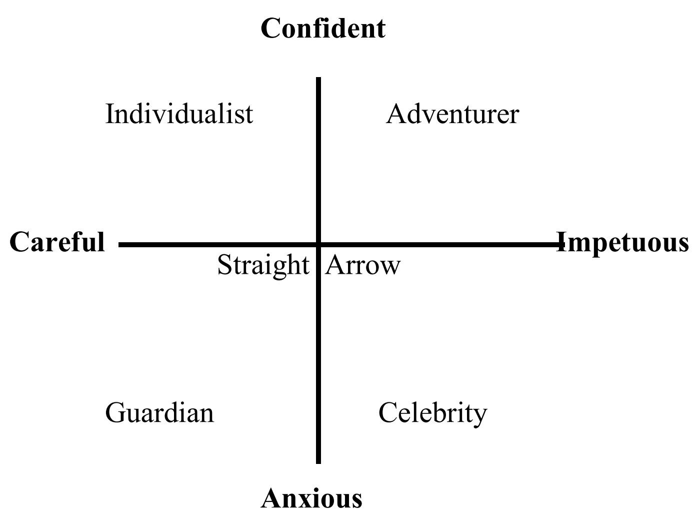
- are possibly corporate executives, accountants, and lawyers who work for companies, doctors who are not surgeons.

The Bailard, Biehl, and Kaiser (BBK) Five-Way Model

- According to the BBK model, there are five types of investors representing five different mixtures of the elements of carefulness and confidence:

  - Individualist;
  - Adventurer;
  - Celebrity;
  - Guardian;
  - Straight Arrow

BBK Classification Model



Individualist

- both confident and careful and tends to be a successful investor;

- will not seek out investment advice from anyone; however, they do not let their confidence lead them into rash or poorly thought-out decisions;

- want their advisor to provide information and, when requested, further explanation;

- cooperate fully in providing the know-your-client information that an advisor requires.

Adventurer

- both confident and impetuous, tending to make quick decisions;

- not usually successful investors;

- typically, will have made up their mind about the “right” investment prior to meeting the advisor and will often not be receptive to any information to the contrary;

- tends to be looking for high, short-term returns and does not focus on longer-term goals;

- finds it difficult to understand why you need to know their personal information, and can be difficult customers.

Celebrity

- does not have confidence in their ability to make good decisions and tends to make rash or badly thought out decisions;

- often wants to do what others are doing and hopes for the best;

- tends to listen to the advisor, but will often not have well-defined investment goals.

Guardian

- careful and anxious, takes an inordinate amount of time to make a decision;

- lack of confidence may result from a lack of knowledge about the investment or because of high levels of risk aversion;

- welcomes suggestions from the advisor.

Straight Arrow

- The straight arrow is neither careful nor impetuous, confident nor anxious.

Life Cycle Investing

- The logic behind this model is that, as people age, their objectives, financial and personal circumstances, and their tolerance for risk also change (as can some qualities of personality):

  - older clients tend to be more risk-averse than younger clients
  - younger clients tend to focus on shorter-term financial goals
  - older clients tend to focus on retirement and estate-building.

- The most important determinant of an investor's asset allocation at any stage in life is his or her psychological willingness to assume risk.

- This hypothesis implies that if the advisor knows the age of the client, then the advisor can infer investor characteristics such as objectives, financial circumstances, and tolerance for risk.

- The weakness of this model is that it is just a model: it will not apply equally to all clients. Single-parent households and investors who start their careers later in life are examples of cases that do not "fit the mould."

Stages in the Life Cycle

- The five stages in a life cycle of an investor:

  1. Early earning years (up to age 30)
  2. Family commitment years (25 to 35)
  3. Mature earning years (30 to 50)
  4. Nearing retirement (45 to 65)
  5. Retired (50 +) – taking into account early retirement

1. The Early Earning Years

- These investors lack family and financial commitments and are oriented towards pure savings.

- They tend not to have life insurance and probably do not need it.

- Investment goals tend to be short-term, but may also have a longer-term component, due to their tolerance for risk.

- These investors tend to have a small investment portfolio with small but growing financial commitments (e.g., car payments).

- They are more likely to bear risk, and their asset allocation is typically heavily weighted towards riskier funds (e.g., 80% equity funds, 10% bond funds, 10% money market funds).

2. The Family Commitment Years

- These investors tend to be married and have children.

- Savings patterns have changed from the early earning years because of substantial financial burdens, and savings that have been accumulated may be quickly used (e.g., downpayment for a home).

- The investor who had high risk tolerance in the early earning years becomes considerably less risk tolerant during the family commitment years.

- The asset allocation is generally shifted to reflect a shorter investment horizon and risk-aversion (e.g., 50% equity funds, 20% bond funds, 30% money market funds).

- Investment goals are shorter-term with a medium-term component.

3. Mature Earning Years

- The family's level of disposable income will determine the transition from the family commitment years to the mature earning years.

- These investors are able to save for short-term and medium-term goals and are beginning to turn their attention toward retirement savings.

- These investors tend to begin to shift their asset allocation back toward a heavier weighting in equities to minimize taxes and for longer-term retirement planning (e.g., 40% equity growth funds, 30% equity funds, 20% bond funds, 10% money market funds).

- Investment goals are medium-term with a substantial long-term component.

- This is the period during which the investor's wealth will increase the most.

4. Nearing Retirement

- Family financial commitments have been reduced and such investors are beginning to think more about retirement savings and planning.

- These investors tend to be more risk-averse than those in the mature earning years (less of a focus on equity growth funds, while also shrinking the equity component of their portfolio).

- Investment goals tend to be medium-term.

- These investors tend to have substantial investment portfolios with minimum day-to-day liquidity requirements.

5. Retired

- These investors rely on the income from their retirement savings to maintain a certain standard of living.

- They tend to be very risk-averse (e.g., the equity component will decline or be eliminated in favour of fixed-income investments such as money market funds and bond funds).

- Investment goals are medium-term, in as much as the investment portfolio must continue to earn income over the medium term.

The Nine Money Personalities©

- This classification was designed by Kathleen Gurney of the Financial Psychology Corporation.

- A client is meant to undergo psychometric testing to determine his or her money personality.

- The score on the test clarifies the reasons for any money difficulties the client might be having; appropriate advice can then be given.

- Money management styles and the emotional reactions that people have to financial decisions are stressed; it is particularly useful as a general model for the money-handling characteristics of investors.

- The nine personalities are:

  – safety players;
  – entrepreneurs;
  – optimists;
  – hunters;
  – achievers;
  – perfectionists;
  – producers;
  – high rollers; and
  – money masters

1. Safety Players

- the most important thing for these clients is security in their investments.

- will often take the easiest safe option or repeat a successful strategy that they have tried before.

2. Entrepreneurs

- this is the type of person who is not as interested in the money as much as in keeping score, and financial success on the stock market is a way of doing that

- extremely motivated by excellence and commitment

- males are over-represented in this group

3. Optimists

- risk-averse
- often near retirement and seeking peace of mind and enjoyment
- happy to leave things in the hands of the advisor and not become too involved

4. Hunters

- often high-earning, educated women who are given to impulse
- strong work ethic – like the Entrepreneur – but doesn't have the same confidence as the Entrepreneur
- tend to think their success was a matter of luck

5. Achievers

- conservative and averse to risk
- protecting their assets is a major focus
- differ from optimists in that they like to maintain control of their money
- tend to be well educated high-earners with families
- believe that hard work and care is more effective in building wealth than is investing

6. Perfectionists

- find fault with every investment
- lacking in confidence and self-esteem
- take no pride in handling financial matters
- tend to avoid investment decisions for fear of making a mistake

7. Producers

- hard and committed workers, but not successful investors because of lack of confidence in handling money

- poor basic financial knowledge may mean they may have less money to invest

- unable to evaluate risk or rewards properly

8. High Rollers

- search out thrills and power

- are extroverts with a creative side

- do everything – work and play – with high energy

- uninterested in financial security

- insist on having a lot of their money in high-risk investments – to the point at which it puts their assets in danger

9. Money Masters

- determined, and able to stick to a chosen course of action

- don't trust to luck

- have a balanced financial approach that allows them to feel secure

- like to have a part in handling their investments, but will take account of sound and sensible advice

Psychometric Investor Profiler

- Industrial psychologist Jonathan Myers has developed this typography based on his work in the field.

- Myers makes the assumption that a basic personality trait will show up in different aspects of a person's life (i.e., a person who is cautious in the physical areas of his or her life will be cautious with money).

- The elements that act on the personality when money is involved are:

  - the uneven perception of gain and loss (i.e., the fact that losses hurt more than gains give pleasure);
  - the way in which the investor views money;
  - personal bias;
  - crowd pressure.

- These factors form an "internal market" that, with the "external market," affect the investor's decision-making.

- Most psychological approaches assume that people's attributes change with circumstances. This approach, however, unlike others, presumes that people always have the same basic attributes.

- However, these attributes can be softened or rebalanced by circumstances and by their method of dealing with them.
- Therefore, two investors with the same profile can make different financial choices, because their approaches to risk (not their attributes or characteristics), acted upon by circumstances, are different

- Investors are classified as:

  - Cautious,
  - Emotional,
  - Technical,
  - Busy,
  - Casual, or
  - Informed

Cautious

- very conservative

- need to have financial security

- don’t like to lose even small amounts of money
- will avoid risk as much as possible
- handle own financial affairs
- think over financial opportunities very carefully

Emotional

- act on gut feelings (heart over head)
- are influenced by “hot tips” or investments that are in favour
- have trouble getting out of a poor investment or cutting losses
- feel (unreasonably) that luck or some other influence will straighten out their financial situations and protect financial assets

Technical

- depend on hard facts and numbers
- trade actively, basing decisions on movements of prices
- sometimes rewarded by spotting a trend
- can become obsessive
- constantly looking for an advantage (often technological)

Busy

- love to be involved with the markets
- will check price movements several times a day
- buy and sell frequently
- trade on any piece of news – gleaned from gossip, newspapers, rumours

Casual

- major involvement is with work and/or family
- trust in hard work to build wealth
- make investments and then tend to forget them, believing they will take care of themselves
- leave the handling of their investments to professionals, but rarely contact them

Informed

- financially assured; trust their own opinions
- watch the market and the economy
- check information from a variety of sources, including listening to financial opinions and the assessments of experts
- will go against the market, but only after looking at all the pros and cons

Similarities Amongst the Typographies

- Can these typographies be compared to each other, or aligned to show a general overall framework?
- We suggest that the personality types can be generally classified as Active or Passive, with one addition created by us: that of the Passive/Aggressive investor.
- The Straight Arrow personality (of the BBK model) does not fit within any category.
- This is how we see them line up; you may wish to draw your own conclusions.

Active	**Passive**	**Passive/Aggressive**
Individualist (BBK)	Guardian (BBK)	Achievers (9MP*)
Adventurer (BBK)	Safety Player (9MP)	Perfectionist (9MP)
Celebrity (BBK)	Optimist (9MP)	Emotional (PIP▪)
Entrepreneur (9MP)	Producer (9MP)	
Hunter (9MP)	Cautious (PIP)	
High Roller (9MP)	Casual (PIP)	
Technical (PIP)		
Busy (PIP)		
Informed (PIP)		

* 9 Money Personalities©
▪ Psychometric Investor Profiler

Chapter 3

Psychological Biases

- Making decisions about investing and investments must occur within all the models discussed above.

- The only conclusion and consensus that can be reached among the models is that decision-making is often far from rational because it is clouded by the fundamental personality trait of the individual. These traits are then compounded by emotional biases and cognitive biases. These are equivalent to the “micro” part of economics that examines specifics.

  - Emotional biases are a distortion in thinking due to emotional factors.

    - A person with emotional biases will usually be inclined to believe something that gives a pleasant feeling (a positive emotional effect) even if there is evidence to the contrary.

  - A cognitive bias is an error in thinking, such as might be attributed to a false memory.

    - This type of error can be partially attributed to problem-solving using mental short-cuts. This is known as *heuristics*, a concept fundamental to behavioural finance.

- There is evidence that our brains have been hard-wired to make certain errors. Hundreds of different biases have been identified and categorized, including biases that affect our judgment, that introduce errors into the estimates and forecasts that we produce, and that cause us to make the wrong choices. Some of these will be covered in the following pages.

- for instance, Tversky and Kahneman (1981), pioneers in the field, found in formulating their theory (Prospect Theory) that people are caused twice the pain by the loss of one dollar than they feel joy at the gain of one dollar. They also value a certain gain more than a less-certain loss, even when the amount of both is the same

- at the same time, they found that people will make great efforts to avoid losses, even if it means that they have to take greater risks

- therefore, "we have an irrational tendency to be less willing to gamble with profits than with losses. This means selling quickly when we earn profits, but not selling if we are running losses" (Tvede, 1999)

- It is important to understand or recognize biases because the more unaware a person is of their biases and errors ("I don't know why I haven't sold this stock since it is doing so poorly"), the stronger the influence that can be exerted on that person's decisions by another ("Then you should sell.") The reasons that underlie behaviour must be understood for the advisor to truly forge a relationship with the investor.

Emotional Biases

Endowment Effect

Symptom: An investor will not take action. He or she will not sell a security even when a positive return has been attained; they have a feeling of being "endowed."

Diagnosis:

- "The fact that people often demand much more to give up an object than they would be willing to pay to acquire it – has been called the *endowment effect*." (Thaler, 1980)

- One experiment showed that students who were given coffee mugs demanded much higher prices to sell the mugs than students who were trying to acquire the mugs were willing to pay for them ($5.25 compared to $2.75) (Kahneman, Knetsch, and Thaler, 1990)

- A further experiment, however, showed that subjects tended not to give up what they had – even to acquire a more desirable object (Lowenstein and Kahneman, 1991)

- This suggests that what is at work is not overestimation of the worth of the possession, but rather the pain of giving it up – also called *divestiture aversion.*

- The endowment effect causes investors to hold onto the investments they already have. For instance, when people inherited money, their investment decisions were very much influenced by what the money was already invested in – e.g., if the money was already in low-risk investments, they tended to leave it there, whether or not this was the best course of action.

- When they already own investments, they emotionally prefer the familiarity of those investments. This also shows another emotional bias: the status quo bias in which people show their preference for things to remain as is instead of risking change.

- In addition investors sometimes recoil from paying transaction fees and so are reluctant to change investments (an example of the disadvantages of being penny wise and pound foolish).

Remedy:

- Becoming aware of the subtle influence of the bias is a start, so the advisor should in most cases point it out to the client.

- Sometimes, when people are made aware of emotional biases, they can consciously try to avoid them.

- However, psychologists warn that emotional biases are deep-seated.

- Some researchers argue that it is sometimes best to accommodate an emotional bias in a client, while at the same time trying to influence him or her to make the best decisions for that person (Pompian and Longo).

- Review the investments in the portfolio with the client and ask the client to consider, if he or she was holding cash and beginning to put together a portfolio, whether she/he would purchase the same investments.

- If the vast choice of investments that are available is what is paralysing the client, have figures to show the disadvantages of not acting.

- Since sometimes these biases can work in the client's favour (e.g., they would have kept the client out of the high-tech bubble), be prepared to deal with this argument by showing how the situation in question is different.

Status Quo Bias

Symptom: An investor does not act despite evidence that some action should be taken, but just maintains an existing position.

Diagnosis:

- Investors choose the investment option that does not require that they make a change – i.e., they seem to prefer the status quo (hence the name).

- This bias can have a profound effect on investors' investment decisions:

  – if they are not contributing to a pension plan, their bias is towards not beginning to contribute;
  – if they have settled early on an asset allocation, their bias is not to change that allocation over the course of the years they are in the plan

- The status quo bias increases as the work required to make a decision becomes more complicated. Therefore, the variety of investment alternatives that are now being offered is one factor in strengthening the status quo bias and perhaps create investor dissatisfaction by providing choices they do not want.

Remedy:

- Because the endowment and status quo bias have many factors in common, the remedy for the status quo bias is much the same as for the endowment bias:

  – Ensure the client recognizes that he or she is employing this bias;
  – Educate the client on lost opportunity costs;
  – Limit the choices that are presented to the client to those that are not radically different from the status quo choices.
  – Consider accommodating the bias but do not refrain from trying to provide better investment solutions.

Attachment Bias

Symptom: The investor sticks to what he or she feels knowledgeable about: whether a company, industry, geographical area or type of investment even if the investment(s) is not producing the returns he or she needs or wants.

Diagnosis:

- This bias is similar to the endowment and status quo biases in that investors who hold a stock for a long time and follow its progress, tend to grow "attached" to it, and hesitate to make a change.

- They see things that happens to that stock (or the company behind it) in an overly optimistic light.

- Investors also strongly favour investing in companies that are known to them – e.g. local industries, the manufacturers of products that they use, the company for which they work.

- This is known as the ***home bias***, and can lead to under-diversification in a portfolio.

- When employees can choose what investments they hold in their pension plans, a disproportionate number invest in the stocks of the company for which they work

- Sometimes they are ***overconfident*** that they will know if trouble looms, but sometimes they are simply more comfortable with a known entity.

- Those same workers tend to resist selling the shares in their own company (or the company from which they have retired) even if the shares are not doing well.

- Such investors continue to resist selling their company stock in order to diversify their portfolios in retirement.

- A study shows that, when telephone-giant AT&T was broken up into a number of regional "Baby Bells," investors bought disproportionately into the stocks of their local carrier (Huberman, Columbia University).

- This is true internationally as well, e.g., Americans invest more heavily in U.S. stocks than any others; Japanese invest more heavily in Japanese stocks – without much consideration to how those markets are doing or their future prospects.

Remedy:

- As one of the three emotional biases (endowment, status quo and attachment) that encourage investors **not** to act, the remedies to be used by the advisor for the attachment bias will be the same as or similar to those employed in combatting the endowment and status quo bias.

- Consider accommodating the bias but do not refrain from trying to provide better investment solutions.

- An attachment bias is more likely to be overcome by the presentation of additional choices to broaden the investor's perspective than would be true of the investor with the status quo bias.

- The advisor might consider that perhaps the attachment exists just because there is an absence of knowledge of alternatives.

Loss Aversion Bias (also known as Regret-Aversion Bias)

Symptom: Investors are unhappy with their returns on investments because they feel their timing on buying and selling is never right and they could always have done better.

Diagnosis:

- People feel real sorrow after making what they perceive to be a mistake in judgment (Statman).

- Loss and subsequent regret is perceived by the client as a risk, i.e., something to be avoided (Deanlebaron, 1999).

- One form of regret is the *regret of commission* and results from taking an action. This could be evidenced by:

  - Regret due to buying an asset and then the asset value falls after the purchase ("I should have bought later.");
  - Regret due to selling an asset and the value of the asset goes up after the sale ("I should have sold later.").

- The *regret of omission* is experienced when there is regret at ***not*** taking an action. This type of regret is essentially the mirror image of the regret of commission. It could result when:

  - an asset is not bought and its value then increases after the decision is made not to buy ("I should have bought.");
  - an asset is not sold and its value falls after the decision is made not to sell ("I should have sold.").

- An investor with this bias can thus be paralyzed by either acting or not acting; anxiety can be creating by winning (but not winning enough) or by losing.

- Further, this type of client can suffer from the sunk cost effect, which is the tendency to persist in an endeavor once an investment of effort, time, or money has been made. Sunk costs are irrecoverable. As Warren Buffett is quoted as saying, "When you find yourself in a hole, the best thing you can do is stop digging."

- However, the client who is hamstrung by the sunk cost effect wants to “keep digging.” Their regret over losses hampers decisions.

- Sunk costs are the same regardless of the course of action that is chosen next. Decisions should be made by weighing future gains and losses. Yet, many studies have proven that the more we invest in something (financially, emotionally, etc.) the harder it becomes for us to give up on that investment. This may be partly due to an error in processing information, called mental accounting, in which it is proposed that people file costs in “mental accounts.” As will be seen in the discussion on mental accounting later in this course, it is very difficult for someone to change their beliefs about their mental accounts and move money among accounts. If this is so, sunk money will exist in an account that continues to cause anxiety to the regretful investor.

Remedy:

- This bias should be taken very seriously, since it creates an investor who basically can never be satisfied with an investment outcome.

- Education can play an important role. If a client is holding on to a losing stock, the advisor should lay out that stock’s risk profile.

- It will be wise to illustrate the *sunk-cost effect* diminishes over time. The advisor may convince an investor to dump a losing stock if he/she allows some time to pass.

- Seek opinions from people who were uninvolved in the original choice.

- When an advisor recommends cutting losses and hears: “We’ve invested so much already,” it will be important to tell the clients that even smart choices (taking into account what was known at the time the decision was made) can have bad outcomes. Cutting losses does not necessarily mean that the original choice was foolish.

- Consider setting up a stop-loss rule (while allowing for normal ups and downs), to prevent the client from holding on to losers.

- If client is selling winners too early (because he is afraid of losing profits), the advisor and client might agree on rules determining when they will sell investments that are going up. These should be related to the fundamental value of the stock.

- If the client is holding on to a stock and afraid to take action, it may be wise for the advisor to review the reasons the stock was first acquired and whether those reasons still hold true.

Disposition Effect (Statman and Shefrin)

Symptoms: The investor sells winners and holds on to losers.

Diagnosis:

- The disposition effect is closely linked to fear of regret as evidenced in the loss aversion bias.
- It refers to the tendency to take actions in order to avoid regret and seek pride.
- Ironically, this effect can lead investors to sell winning stocks because, when a stock goes up in value, the investor feels pride that he or she has picked that stock, and wishes to lock in the gain by selling. The investor is unconcerned about how much more the stock might have increased.
- At the same time, the disposition effect leads investors to hold on to stocks that have decreased in value (beyond the regular minor fluctuations that are expected) rather than face the regret of having made an error.
- The act of selling the stock would confirm that error, and so is put off hoping that the stock will go up in value and they will not need to feel the regret associated with loss.
- As mentioned earlier, psychologists have found that the regret that investors feel at a loss is twice as strong as pleasure in a gain (e.g., losing $1 is twice as upsetting as gaining $1 is pleasing).
- Such regret can be damaging to an investor's portfolio, since asset allocation and portfolio rebalancing sometimes requires selling some of an investment that is doing well and buying more of one that is losing.
- Fear of regret may cause investors to make irrational decisions – decisions based largely on emotion rather than reason.

Remedy:

- As with the loss aversion bias, a stop-loss rule (while allowing for normal ups and downs) will prevent the client from holding on to losers.
- A client who is selling winners prematurely due to the pride associated with "the win" could benefit from analysis of the stock that might prove the stock is charting upwards

and will continue to increase in value. The advisor will want to set rules about when to sell and under what conditions.

Risk-Aversion (Snake-Bit) Effect

Symptoms: The investor is reluctant to take a risk and overestimates risk. He or she prefers underperformance to the chance of loss and panics when loss is indicated.

Diagnosis:

- Risk aversion is closely linked to the loss aversion bias (fear of regret).
- The fear of regret may cause investors who have suffered the consequences of poor investment decisions in the past to be too conservative in their current financial decisions.
- Thus, those who suffer investment losses can react as if they have been "snake bit," and become reluctant to take any risk at all, or will tend to overestimate the risk that is posed by an investment.
- Instead of making confident financial moves that involve risk and offer greater rewards, many investors miss opportunities by clinging to safer low-risk positions, which often underperform.
- Investors who avoid risky assets see less growth in their portfolios, which may hinder them from achieving their financial goals.
- Risk-averse investors, for example, may avoid purchasing undervalued investments in depressed markets, which can often offer bargains, due to fear that the market will continue its downward movement.
- As mentioned previously, the investment industry makes wide use of risk-tolerance questionnaires, but these are a starting point only – they are often one-size-fits-all documents that are too vague in addressing what risk, and its attendant losses, can mean.
- The forms are meant to pinpoint the maximum risk a client can tolerate, but this is not necessarily the suitable amount of risk for that client at that time
- Clients can also be reluctant to admit that they cannot handle risk, although a bear market will quickly reveal this weakness. Conversely, overconfidence can lead investors to overestimate the risk they can handle, particularly during bull markets.

Remedy:

- Returns on safe investments can be more aggressively invested so that any loss that is incurred is not to principal and to illustrate the results of better returns.

- Remind client that not acting is also a choice – with consequences.

- Time value of money calculations can easily show the difference in end results by small increments in investment returns.

- The client who is investing for the long term should not be reviewing where investments stand on a daily or monthly basis and incurring panic-creep. The advisor must work with the client to ensure the portfolio is checked on a regular basis but more than annual rebalancing is overreaction and can have negative long-term impact.

Break-even Effect ("Break-Evenitis")

Symptom: Investors are focussed on breaking even; they become risk averse as gains are experienced.

Diagnosis:

- Decisions regarding investments tend to be dependent on the original price that the investor paid for that investment.

  - Faced with a loss, investors will become risk-takers (often at the time they should be trying to reduce their losses), in an effort to make up what they have lost and break even.

    - research suggests investors will take greater risks to make up a loss than to realize a gain

  - Faced with certain gain, investors tend to become risk-averse.

- This suggests that, in terms of its emotional effect, the break-even effect is even stronger than the "snake-bit" effect because break-evenitis sees risk aversion created by gains, whereas the snake-bit effect sees risk aversion created by fear of losses.

Remedy:

- Breaking even may be irrelevant if the investment is an unsuitable one due to its risk profile; revisiting the risk tolerance of the investor in relation to the risk of the investment may be a good strategy.

- Capturing moderate gains for reinvestment will ensure investors do not move too far from their break-even comfort zone.

The Herd Effect

Symptom: Investors buy or sell "flavour of the month," regardless of suitability.

Diagnosis:

- Investing is to some extent a social undertaking; it involves the capital markets in which people interact in order to transact.

- Whereas at one time investing was quite a private activity and actions/transactions rarely spoken of, it is now far more public.

- Many people invest, and the countless magazines, ads, radio and TV programs, newsletters, and water-cooler conversations about investing create a sort of social pressure. Many investors feel they have received hard facts about a stock when all they have heard are the opinions of many people, or "noise."

- Investors then follow the conventional wisdom and do what "the noise" indicates: buy what everyone is buying, so that regret is lessened if the stocks go down ("Oh well, I wasn't the only one to make that mistake. Everyone is in the same boat.") or sell what everyone is selling (ditto reaction).

- This is the herd effect in action; a condition in which people affected by this behaviour want to keep up with (or just ahead of) "the herd." It is also known as the bandwagon effect.

- It can be created by investing that takes place very quickly, in which sufficient research and careful decision-making has not been undertaken.

- Investors jump on the bandwagon in an attempt to time the market; they believe the price has not peaked or bottomed out. Frequently, this is not the case.

- Studies have shown that far more money flows into mutual funds that have performed very well than flows out of poorly performing funds, which might actually offer far greater opportunities for growth.

Remedy:

- Investors should be shown the positive effect of dollar-cost averaging instead of market timing as a means of enhancing returns.

- Education is important; especially the advisor should have available contrarian views of the investment being followed by the investor.

- Advisors should be aware of current stock "darlings" and be up to date on their movements, so as to be able to offer unbiased advice and information.

- Advisors should also look to the portfolio of the investor to see if he or she has established a pattern of following the herd. If so, the introduction of new stocks or asset classes could help the investor become more independent in decision-making.

Errors in Thinking (Cognitive Errors)

- James Montier of the British firm Dresdner Kleinwort Wasserstein, in "Part Man, Part Monkey" (see Bibliography), lays out the distinctions between two types of Cognitive, or Thinking, errors (discussed below).

- One category arises from **self-deception** (how investors fool or "trick" themselves into certain beliefs) including:

  - overconfidence bias
  - optimism bias
  - ambiguity bias
  - self-attribution bias
  - confirmation bias
  - hindsight bias
  - cognitive dissonance
  - conservatism bias

- Montier identifies the other category as arising from **errors in processing information** (known in psychology as heuristic simplification). These errors will be explored following the errors of self-deception.

Errors of Self-Deception

Overconfidence Bias

Symptom: Investors have far too much faith in their conclusions about stock values and the direction in which the market is moving.

- Overconfidence is one of the most prevalent psychological biases that exists among investors. It causes investors to put unusual weight on information that supports their own decisions and to disregard news that might put those decisions in question.

- It leads investors to:

  - *trade too much* (which is not necessarily bad if one is well informed and skilled enough to beat the buy-and-hold strategy and cover trading costs)

    - however, in a study it was shown that general overtraders did not pick winning stocks often enough to outstrip the stock returns of the low-turnover group (Barber and Odean, 2000)

    - in addition to their lack of particular success in picking winners, the investors then had to pay trading fees and commissions, which further contributed to their low rates of return

  - *take increased risks*. They tend not to understand the level of risk they are taking (e.g., overconfident that a selected stock is a winner, an investor may put too much money into that one stock and underdiversify), or may underestimate the risk in a potential investment.

- The average overconfident investor is described as a professional male with an advanced academic degree.

- Women tend to take a longer-term view and hold on to investments longer. On average men tend to make 1% less per year on their investments than women because of frequent trading

Diagnosis:

- Overconfidence is one of the major stumbling blocks in the path of investors.

- People in general tend to overestimate their abilities. For instance, when drivers were asked whether, compared to other drivers on the road, their driving was below average, average, or above average, almost everyone claimed to be above average – which suggests at least two-thirds of them were overestimating their ability (Nofsinger).

- Investors often think they have more and better information than they really have because of overconfidence in their own intelligence or analytical abilities or overconfidence in their choice of advisor.

- Investors who time the market correctly one time, or for a period, tend to attribute it to skill, not luck – especially if they have some early successes. This is particularly true during a long bull market.

- The *Wall Street Journal* amusingly counters this bias in their Dartboard columns, in which the magazine pits the stock picks of several investment analysts against a portfolio that is chosen by throwing darts at the financial pages; the dartboard often does best.

- Tendencies to overconfidence are often enhanced, because of:

  – the increased availability of data on company stocks and on the movements of the market that can be gathered from numerous publications, TV, and the Internet
  – the ease of investing, especially online

- Overconfidence is based on the *illusion of knowledge* and the *illusion of control*

The Illusion of Knowledge

- The illusion of knowledge refers to the tendency of people to believe that the more information they have, the more knowledge they have, and therefore the more accurate their decisions.

- This is properly termed an *illusion* because:

  – too much information can be confusing, and can actually mislead;
  – people tend to see new information as backing up decisions they have already made;
  – simply having information is no guarantee that a person knows how to use it properly.

The Illusion of Control

- Overconfidence increases when a person *believes* they have control over a situation.

- The illusion of control is increased by:

  – *the sequence in which an outcome is noted* – if someone has a sequence of successes early in a new activity, such as investing, they tend to become overconfident about the outcome of the next move (especially evident in an extended bull market);

  – *information available* – the more information a person has, the more they feel in control, although they may not check out its accuracy – as noted above, the volume of financial information available has increased greatly, but its quality may not be helpful;

  – *choice* – people feel they have more control over an outcome if they actively choose an option (have you ever thought you had a better chance of winning if you pick your lottery numbers yourself?) The rise of discount brokers has made it possible for many investors to invest without professional advice, and thus make their own choices and feel more in control;

  – *familiarity of the task* – if people are used to something, they feel more in control of it. The old adage of familiarity breeds contempt applies. Now that investing is discussed and written about widely, the message is that "anybody can do it"

  – *active involvement* – the more people have hands-on participation in something, the more they feel in control of the outcome (for instance, many people feel they have a better chance of winning a coin toss if they do the tossing themselves). Distribution of information via prospectuses, annual reports, and charting available over the Internet, and the availability of discount trading, all empower the client to make decisions and foster an illusion of control by the investor (Nofsinger):

Remedy:

- As one of the cognitive errors, the overconfidence bias responds well to concrete information.

- If a client is convinced he or she can predict stocks that are going to appreciate in value, the advisor might suggest a review of his/her records of trades over the previous two years (or more if necessary).

- Research has shown that the average investor underperforms the market by an average of 2 per cent.

- If the client does not give enough weight to downside risks in their picks, the advisor might review those picks for poor performances, while showing the client studies about the ups and downs of the market.

- The cost of overtrading can usually be addressed by the advisor asking the client to keep track of every trade and then calculate returns (after commissions, etc.) (see Odean and Butler in bibliography).

- If the client clings to stocks that he or she picked, and the portfolio is underdiversified, the advisor might suggest hedging strategies (to a more sophisticated client) or simply ask him or her to look at the stock as if he/she had never purchased it.

Illusion of Control

- Stress to clients the myriad national and international economic forces and psychological biases to which the market is subjected, and how little control even the experts have over outcomes.

- A client who is using an arbitrary pattern in stock-picking can be shown this behaviour by the advisor (although overconfidence is hard to fight, tackling the logical mistakes that contribute to it is something an advisor might try)

- The advisor could encourage the client to examine contrary viewpoints, or supply publications that discuss them.

Optimism Bias

Symptom: An investor overestimates the probability of a favourable result. It is also known as wishful thinking.

Diagnosis:

- Although optimism describes an emotional state or personality, the bias of optimism, like overconfidence (to which it can contribute), can lead to faulty reasoning.

- Optimism can be useful, leading an investor to take initiative, if the optimism is built on confidence and not overconfidence.

- If optimism becomes overconfidence, however, it can lead to:

  - passivity or lack of attention to investments, in the belief that everything will work out for the best;
  - mistakes in decision-making and investing, because the investor is overconfident that the prospect is rosy;
  - neglect of due diligence, because unfortunate outcomes are not considered.

Remedy:

- Think about how you can keep the client grounded in reality; this may mean being the bearer of bad news or presenting the downside of an investment in a forceful manner.

- Do not feed the bias by emphasizing the positive; aim for a neutral position.

- Educating the client on both sides of a position will be essential.

Ambiguity Bias

Symptom: Investor has difficulty in making decisions. This may lead to loss of opportunities because a decision can not been reached or the investor rushes a decision to remove himself from an ambiguous situation and assumes inappropriate risk.

Diagnosis:

- The mistakes in thinking associated with overconfidence can also lead to the ambiguity bias.

- People dislike ambiguity more than they dislike risk, and they hesitate in situations of uncertainty (Knight,1921).

- The degree to which this bias is experienced depends on:

  - the ***competence effect*** , i.e., the degree to which the investor feels competent and knowledgeable and, in effect, they bet on their own judgment
  - feelings of competence on the part of the investor tip over into **overconfidence** and overtrading

- Investors who don't feel competent are more likely to trust to chance. They are also more likely to:

  - insist on a higher rate of return to compensate them for the unpleasantness of ambiguity (and therefore avoid certain asset classes that might balance their portfolios)
  - feel safer with companies they know or which are local (less ambiguity, because they feel there is an increase in familiarity/knowledge), thus enhancing the **home bias**

Remedy:

- If investors resist investing in certain asset classes (such as small cap funds), or demand unusually high returns to do so because of ambiguity around those assets, the best thing the advisor can do is provide education.

- The advisor should outline how those assets will benefit the portfolio, and how they might, in fact, reduce risk.

- If the client is demonstrating the competence effect by showing signs of overtrading, the advisor could offer help by stressing the financial downside of bad investing practices like overtrading.

- If the competence effect, and the resulting need to feel control, is causing an increase in the *home bias*, the advisor should encourage the client to experiment with investments outside that area and continue to stress the essential importance of a diversified and balanced portfolio.

Self-Attribution Bias

Symptom: The investor believes success is the result of their own skill and knowledge, while blaming failures primarily on the advisor.

Diagnosis:

- Self-attribution is also related to overconfidence and optimism.

- Advisors warn that some investors even (perhaps subconsciously) count on their advisors to be there to take the blame when investments turn out poorly, while taking credit for the successes themselves.

- An investor with this bias will take great initiative to act based on their instinct or research.

Remedy:

- When an investor shows strong symptoms of this bias he or she may be such a difficult client and so resistant to advice that the advisor might have to terminate the relationship.

- When the bias is evident to a lesser extent, some suggest the investor could be set up with two accounts: one in which he or she makes the decisions alone; another in which the advisor sets the direction, while allowing the investor considerable latitude for decision-making within a larger framework. This is often not practical, and would mean extra costs to the investor if the accounts were in an RRSP.

- Another solution is to provide the client with a regular report that shows each holding in the portfolio, the original cost or the adjusted cost base, the market value now, the percentage gain or loss, and income generated, when the holding was originally purchased, and who initiated the recommendation to purchase (client or IA).

Confirmation Bias

Symptom: Investor is interested only in what he or she is interested in ("Don't talk to me about bonds. I'm not interested.") and only believes what he or she wants to believe.

Diagnosis:

- It is a human tendency to search actively for evidence that supports ("confirms") a view that we already hold – and to avoid anything that will cast doubt on it.

- This can lead investors to believe only information that reinforces the value of a investment they wish to purchase when doing their due diligence, or about which they have heard good reports, ignoring any information to the contrary.

- Such investors are thus uninformed about the opposite side of the trade, and less likely to sufficiently understand their own position.

- Investment experts, however, stress that negative evidence can often give a truer picture of a potential purchase, such as looking at the ten-year or five-year return on a mutual fund instead of the twelve-month return.

Remedy:

- Ensure the client understands that the point of investing is to make a profitable decision.

- Do not let the client think anyone is keeping "score" of who picked which investment and whether that investment has performed as anticipated.

- Encourage the client to seek out dissenting voices, or provide contrary information from reputable sources.

- Encourage the client to view decisions in as part of the larger picture, rather than in isolation.

Hindsight Bias

Symptom: An investor who believes that he or she can predict events, after they happen ("I knew the stock market was going to plunge 400 points yesterday.")

Diagnosis:

- Hindsight occurs when a person believes a particular outcome was predictable, after the fact.

- Also known as the "I-knew-it-all-along" effect.

- Some psychologists suggest that this bias arises from the human need to believe that there is order in the world and that events follow one another in a way that can be predicted.

- This bias tends to foster overconfidence in the investor, because under its influence, they forget their failures and magnify their successes (which, of course, they believe they foresaw).

- The hindsight bias, together with the confirmation bias, is a way for investors to edit or censor reality and enhance the validity of their own beliefs.

Remedy:

- Engage the client in consciously testing whether predictions are specific and measurable.

Cognitive Dissonance

Symptom: Investor claims greater success than actually occurred and bases decisions on this biased record of achievement ("I want to be successful and all my investments have been successful. Therefore I will continue to make wise decisions the way I have in the past.")

Diagnosis:

- Memory does not record events factually, but edits them so that for the most part negative or painful feelings recede with time while positive or happy feelings linger.

- People in general want to think of themselves in the best light possible, e.g., as a smart investor.

- When something occurs that throws that positive self-image into doubt, they experience discomfort at the contradiction between their desired belief and any evidence to the contrary.

- This discomfort is called "cognitive dissonance" by psychologists. In cognitive dissonance, the natural reaction is to reshape any memory or belief about the past to fit the individual's desired self-image.

- Cognitive dissonance is also seen when people have to choose between two alternatives, both of which have advantages and disadvantages. One example of cognitive dissonance is buyer's remorse, in which feelings of guilt are triggered for purchasing beyond one's needs.
- People feel an emotional attachment to the decisions they make. They will therefore go to some lengths to rationalize their choice and to explain away any facts that suggest their decision was wrong.

- Because it stands in the way of rational and balanced decision-making, this has obvious implications for investments.

- There are two ways in which cognitive dissonance relates to decision-making:

  – *selective decision-making* takes place when someone is so committed to an original decision that he or she persists in clinging to it even in the face of economic loss, and rationalizes that persistence

    ▪ one example of this is an investor who continues to invest in a company that is failing, so that previously invested funds will not be "wasted." This is a distinct decision that effectively throws "good money after bad" and is not the result of a dollar-cost-averaging strategy.

- *selective perception* can be seen when someone takes in only those facts that back up the course he or she has chosen

  - the investor suffering from this cognitive error may acquire only inaccurate information that leads to serious miscalculations

Remedy:

- The basic problem with cognitive dissonance is what the investor does to avoid evidence that conflicts with his or her perception of events.

- In *Behavioural Finance and Wealth Management*, author Michael Pompian lays out three ways in which people cope with cognitive dissonance:

  - they modify their beliefs (e.g., convincing themselves that it is not a problem to hold on to a losing stock)
  - they modify their actions (e.g., telling themselves they will never hold on to another losing stock; the danger is that, if they fail in this vow and then make it again and again, it can become ineffective)
  - they modify their perception of the action by rationalization (e.g., convince themselves that, while it is not good to hold on to losing stocks, in this particular context it is okay); this can be a destructive habit of mind

- Cognitive dissonance is hard enough to deal with oneself, and is a delicate subject to broach with clients, since the advisor is tampering with behaviour that clients may be hiding from themselves.

- If the advisor thinks a client is receptive, an objective analysis of the losses will encourage the client to admit that he/she has made an objective mistake (only the client can deal with the inner distress).

- If the result of such an analysis administers the required shock to the client, the advisor needs to support the client in analysing the mistake to ensure the mistake is not repeated and remedy the mistake as soon as possible.

Conservatism Bias

Symptom: Investors under-react to new information and become entrenched in a position for reasons that no longer hold true.

Diagnosis:

- Once investors with a conservatism bias have stated a view or taken a position or accepted a forecast, many of them find it difficult to move away from it.

- They demonstrate a lack of flexibility in reacting to new information (underreaction).

- This means that such investors give more weight to forecasts than they do to actual updated information (e.g., they have bought stock on the grounds that the company is expanding internationally, and find it hard to take action when they hear that this move has encountered difficulties)

- When they do move, they do so slowly, and therefore can fail to profit from changes or to cut their losses.

- Advisors comment on clients who are so stuck on a position that they simply are unable to react rationally to new information due to the difficulty and stress of processing it.

- This bias is more likely to occur if the information on which an investor based the initial decision was complex and difficult to digest, or if the new information is hard to understand and absorb (i.e., it is easier to stick with the prior – sometimes hard-won – position).

Remedy:

- Since this is one of the cognitive biases, the advisor can help a client overcome or lessen a conservatism bias by providing information.

- Clients should be encouraged to acquire and analyse new information, determine a course of action, and then implement it (if they have trouble understanding the information, be ready to interpret it).

- Providing the best professional advice is a major aid to the client.

Errors in Processing Information

- Unlike the preceding biases which result from self-deception, errors in processing information result from the mental organizing principles people have had to develop to deal quickly with the immense amount of information that they need to absorb and process in order to make decisions.

- These organizing principles can take the form of mental shortcuts or rules of thumb (also known in the literature as *mental heuristics*).

- Errors of **information processing** include:

  - mental accounting
  - representative bias
  - framing
  - anchoring and adjustment bias
  - availability bias
  - recency bias

- While rules of thumb can serve their purpose well in many situations, allowing a person to function without becoming overwhelmed by information and choices, they can also lead to errors in thinking.

- Psychologists have found these errors in thinking to be pervasive and consistent in human decision-making – and difficult to eradicate (possibly because the ability to make quick assessments and generalizations was once linked to actual survival).

Mental Accounting

Symptoms: Investors separate money into mental files, each tagged according to a purpose. They fail to see the "big picture" and may show lack of diversification. They may also show evidence of the Disposition Effect (page 28).

Diagnosis:

- This term was first coined by Richard Thaler of the University of Chicago.

- It describes the way in which people employ a mental accounting system to categorize and evaluate economic outcomes in imaginary accounts that are not interchangeable

- In his book *Investment Madness*, John Nofsinger compares the mind to a mental filing cabinet: each "folder" contains the costs and benefits of a particular decision; one may be labelled "savings," another "mortgage," and so on.

- The three typical classifications to which people assign their money are:
  1. current income
  2. current assets

3. future income

- People employ mental budgeting to balance the benefits of consumption with the costs in each folder, or mental account (for instance, people often prefer to pay as they go, because the balance between cost and benefit is tighter).

- Now that debit cards have become so prevalent, it has been noted that people seem to put paying by debit card and paying with cash in separate "accounts" – Nofsinger speculates that this is because debit cards reduce the sense of having spent money (i.e., debt has been avoided), and this increases the consumer's pleasure in the purchase.

- Once a thing is "filed," it is hard for the decision-maker to view it in any other way. This can be seen when someone takes out a high-interest loan to make a necessary purchase, when he or she has the money available in a savings account but does not use it.

- "Money does not come with labels. People put labels on it." (Nofsinger)

- One example of mental accounting is termed the ***house-money effect*** in which studies have proven that people will gamble recklessly with money they have recently won. The effect can be extrapolated to show that people who have money in their pockets will choose a gamble; those who start with empty pockets will reject it.

- The house-money effect comes into play when investors fall into the trap of viewing money made from bonuses, tax refunds, or windfalls differently than they view money they have earned with effort.

- This is because money acquired in this way can more readily be spent or risked, because it falls into a different mental account.

- Another example of mental accounting is the ***sunk-cost effect*** discussed previously as a condition experienced within the loss aversion bias. Clearly people who are affected by sunk costs have put past, unrecoverable costs into a mental folder; they have great difficulty either forgetting the money or moving it into another folder in which some losses could perhaps be recovered.

- It is evident that people show an increase in commitment to a course of action after an effort has been made or a cost has been incurred (see reluctance to sell losing stocks, below).

The Influence of Mental Accounting on Investors

- Mental accounting is a very deep-seated bias that can sometimes have beneficial effects (for instance, if people need to save for some result, it increases the likelihood that they will not raid those savings for other purposes).

- However, it can also cause serious investment mistakes:

- By putting various investments in separate mental "files," an investor does not look at constructing his or her portfolio as a whole. In doing this, the investor tends to look at each purchase individually, and thus:

  - misses out on opportunities to offset positions across accounts (e.g., reduce risk)
  - misses out on opportunities to make correlations among investments in the portfolio (optimizing how the investments work with each other)
  - doesn't give enough thought to diversification in the portfolio

- Thinking in separate "accounts" can increase the Disposition Effect (see page 28):

  - an investor might be more likely to hang on to a losing stock, even though the stock could be dragging down the portfolio, because closing out that particular "account" would solidify the loss and trigger feelings of regret

- By not considering the portfolio as a whole (and succumbing to the Disposition Effect), an investor may fail to appreciate how cutting the loss on one stock can offset the tax implications of a gain in another stock.

- The investor takes more and more risks in specific accounts that are increasing in value because he or she does not think of the stocks in the portfolio as connected, as having an effect on each other.

- Mental accounting has been found to produce an imbalance in the portfolios of employees who can acquire company stock in their pension plans.

  - they tend to allocate a particular portion of their savings to the "mental account" labelled "company stock" (also a function of the familiarity bias); typically this amount is disproportional in the context of the portfolio.
  - if other stocks are also owned, there is potentially too much allocated to equities within the portfolio

Remedy:

- The advisor must remember that mental accounting is a result of an error in processing information; perhaps the investor has employed mental accounting to help him or her accommodate the vast quantity of financial details that face an investor. Overcoming the bias will require diligent effort on the part of the advisor to instruct the investor about the interrelationship of investments, asset allocation, and portfolio construction and management.

- The advisor should also be alert for an inability to make decisions on the part of the investor. If the investor does not feel confident in decisions, then he or she can quickly resort to mental files for evidence of how such a decision has been handled previously. Guiding decisions with information and encouragement will be key.

Representativeness Bias (or Heuristic)

Symptoms: Investor is guided by stereotypes and assumes past behaviour is a good indicator of future behaviour.

Diagnosis:

- People have a natural tendency to group and classify things in order to reduce the complex task of handling a great deal of information.

- When they encounter something that doesn't immediately fit into one of their categories, they put it into the category that is the best – if not exact – fit, and tend to view it that way thereafter.

- As mentioned, this has the benefit of applying knowledge gained from previous experience to something new – and to do so quickly.

- However, sometimes the new element only resembles – i.e., is representative of –those things, thoughts, etc. that are in that certain classification.

- The basic fallacy is to assume that a similarity in one aspect of comparison means similarity in other aspects.

- This leads a person to make errors in his or her understanding of an element, by assuming that things that share qualities are exactly the same.

- This can easily lead to faulty analysis and inaccurate conclusions.

- Among other things, representativeness can lead an investor to:

  - think of a past winner as a good company and therefore as a good investment (this is not necessarily true, since a good investment has a potential for growth, and a good company may already be at the height of its business cycle with little room to increase in value)
  - classify a stock as, say, a value investment, and treat its rewards and risks as consistent with his or her views of that type of investment – whereas there may be vital differences in this particular stock
  - assume a stock will behave the same way (e.g., increase in value) as others in a group are behaving, just because he/she has mentally placed it in the same group
  - confuse a stock's returns in the past with its returns in the future

- Other errors in reasoning that are related to the representative bias include:

  - ***the gambler's fallacy***, which proposes the existence of runs of good and bad luck
  - ***the law of small numbers***, which assumes that a small sample is representative of a larger group

Remedy:

- Provide analysis of the returns of the latest "hot" mutual fund or stock over a extended period to show a more realistic picture than that suggested by a recent winning streak. This also applies to a "cold" pick with analysis showing a better prospect than the current losing streak would indicate.

- Ask the client pointed questions about the comparative performance of similar types of stocks or funds of the same size, the length of time the manager has been handling the fund, the long-term reputation of the fund manager, the long-term returns of the fund, etc.

- Stress the wisdom of taking care to select a diversified portfolio that is planned to meet particular financial goals, and then sticking with it, subject to periodic review.

Framing Bias

Symptom: Investor sees situations only from his or her point of view, without reference to the "big picture" and decisions are made subjectively ("I like that company and I want to buy shares.")

Diagnosis:

- If an investor has decided to make an investment for emotional reasons, there is a tendency to "frame" the decision, or put it in a context, that makes it seem more rational.

- The biased investor can convince his or herself of the probability of an unlikely outcome by setting it in a plausible scenario (even if the story depends on chain of unlikely events).

- In fact, this can cause the investor to distort information to lend weight to an (already formed) decision.

- Often linked to the Confirmation Bias.

- If investors are adept at this, it can lead them to believe their own reasoning, despite evidence to the contrary.

- Also, if investors aren't aware of this bias, it can make them susceptible to sales pitches and other messages that are skillfully framed.

Remedy:

- The advisor needs to be aware of framing on two levels:

  - how he/she communicates with the client;
  - whether or not the client demonstrates any framing errors.

- The advisor must ensure that explanations to the client are framed in ways that are clear and objective.

- The advisor must stay alert to whether he or she has interpreted the client's mindset correctly, or whether communication been affected by the way in which the client's hopes and objectives have been framed.

- The advisor should make sure he or she acquires an accurate idea of the client's idea of risk.

- If clients are demonstrating ***narrow framing***, concentrating on the fortunes of one stock or one asset class, to the exclusion of others, the advisor needs to:

  - encourage the clients to keep the big picture in mind, by reminding them of their plans for wealth accumulation and other long-term goals

  - demonstrate the importance of asset balance in portfolios, and remind them of how that balance helps attain their goals

- If framing, coupled with loss aversion, is making a client react to losses with risky behaviour or to gains by being unwilling to look further, the advisor should actively encourage the client to try to isolate any decisions from what came before.

Anchoring and Adjustment Bias

Symptom: Investor bases decisions on past prices. ("I'm not going to buy that bond at 5.8%; last year it was returning 6.4%)

Diagnosis:

- People are likely to base estimates and other decisions on a known point or a familiar position, which acts as an "anchor."

- Once an "anchor" is chosen, people tend not to adjust their position up or down sufficiently, even when new information is received.

- The following illustrates the effect of setting an anchoring price:

  - two groups of real-estate agents were asked to evaluate a house and given the same information about its amenities
  - one group was told that the asking price was higher than the asking price that was quoted to the other group
  - the group that was given the lower asking price consistently valued the house lower than the other group. This is because they were anchoring on the lower price (Northcraft and Neale, 1987).

- Anchoring can lead investors to:

  - become fixated on a higher price they remember a stock selling for in the past, but which has no relation to present reality, and think the stock should reach that price before they sell it – or, conversely, anchor to a low price before they buy.
  - make forecasts about the market that cling too closely to the present levels
  - judge the potential movement of an entire asset class on the present level of returns
  - be reluctant to adjust their original estimates sufficiently in light of new information about a company

- Faced with uncertainty (which is everywhere in investing) some people feel the need to grasp at anything that will serve as a base point.

Remedy:

- Awareness tends to be a good weapon against this bias

- The advisor may ask clients who shows signs of anchoring simply to analyse any stock sale, with particular attention to whether they are being objective or are pegging their sale price on a price that is no longer available or relevant.

Availability Bias

Symptom: Investor acts and reacts according to the greatest quantity of information.

Diagnosis:

- This phenomenon (like so many others) was first reported by Tversky and Kahneman

- People who demonstrate an availability bias base their guesses about the frequency with which something occurs on whatever they can remember most easily, as opposed to objective study.

- When people are asked to answer a question, such as "Do people die more often from shark attacks or lightning?" they immediately think of how many instances of each that they recall.

- Since shark attacks are more dramatic, are more likely to be reported, and are reinforced by movies like *Jaws*, they might answer that shark attacks kill more people (Montier, 2002), whereas lightning deaths are far more prevalent.

- They have been influenced by the availability of information on shark attacks and by its dramatic impact.

- The assumption is "If I remember it, it must be important."

Remedy:

- The advisor should be prepared to confront an investor with some sensible and objective questions when he or she comes in eager to buy the latest "hot" stock.

- Remind the investor of his or her long-term plans, and discuss how this new investment will fit into those plans.

Recency Bias

Symptom: Investor acts and reacts to the most recent information.

Diagnosis:

- People to give more importance to a fact that they have retained most recently. For instance, if someone hears about a spectacular crime that has just occurred in a city to which they are journeying, they will think of that city as more violent, even though records prove that the city has only one crime a year.

- Recency bias is closely related to availability bias, since it is likely that what is remembered most easily is also the most recent memory.

- This bias can lead to major errors in the context of investing.

- Investors become convinced to buy a much-hyped IPO that they heard about over lunch that day, although they have done no due diligence on the company.

- Investors also become are too ready to accept short-term investment-performance records for mutual and other kinds of funds.

- These investors track fund managers who have posted good recent returns over a couple of years, and forget the long-term variations in the market (this also shows small-sample bias).

- Such investors can also judge their own advisors unfairly, comparing them to the recent (but possibly short-lived) returns of some “star” managers who are being touted.

Remedy:

- Encourage the investor to always put new information in an historical context.

- Ask the client to explain why he or she is making or suggesting a certain investment choice.

- If a client is a “busy” stock-picker, stress the importance of doing homework (studying the stock’s growth over time, its current status, and any other relevant information), instead of simply reacting to recent data.

- Particularly impress on long-term investors that they should put thought into their best asset allocation and then resist the temptation to move from it – despite the latest news in the financial market.

Probability Blindness

Symptom: Investor overreacts to an event by assuming the event will have a significant effect on his or her investments.

Diagnosis:

- Probability blindness refers to the error of treating different probabilities as if they were the same (e.g., treating one in a million risk in the same way as a much lesser risk)

- In the grip of this bias, people view the atypical as probable.

Remedy:

- The advisor must keep events in context for the investor with either an historical or other perspective that the investor does not have, or chooses not to consider.

Social Changes that Have Increased Mental Errors in Investing

The Internet

- Even though the first Web browser became available only in the early 1990s, the Web is now changing almost every aspect of communication.

- It is having an obvious effect on the world of investing, both by providing information and by supporting the rise of discount and online brokers.

- The vast amount of information available over the Internet can foster overconfidence in investors who mistake information for experience and skill.

- It is a good example of the illusions of knowledge and control.

- Investing on the Internet has obvious advantages for investors, providing ease of access to information, speedy transactions and low fees/commissions.

- However, in addition to fostering overconfidence with its access to a large pool of information, the Internet and the online and discount brokers can encourage overtrading by making the buying and selling of stocks easy for investors.

Popularity of Investing

- Whereas at one time investing was strictly the purview of investment professionals, it has now become an activity that can be easily undertaken (in terms of opening an account and trading) by anyone with any amount of investment knowledge. Such investors do not have the benefit of an advisor checking their biases, but instead are free to transact in any way that suits them, and thereby almost certainly suffer from biases that interfere with their decisions. Herding, and the availability and the recency biases, will very likely affect investors who "go it alone."

- Investing is now discussed and written about at all levels and is a popular topic of social conversation, generating rumours and tips that are unsubstantiated.

- Because the source of information is not available, it is impossible to check its accuracy.

- Too much weight is given to recent information, rather than long-term prospects.

Advertising

- As investing has become widespread, funds and investment firms have targeted the public with their advertising (especially around RRSP season).

- Many of these advertisements give the impression that investing is easy and that "anybody can do it."

- Such advertising uses the availability bias to reinforce the ease of making investment choices.

- Overconfidence is created among inexperienced investors by advertising targeting the general investing public.

The Final Analysis

- As mentioned earlier, there are hundreds of biases that affect the behaviour of investors. Here is a slightly different organization of the emotional and cognitive biases to provide some additional insight into this very complex subject.

Comfort Zone Biases **People tend do what's comfortable rather than what's important**	**Perception Biases** **People's beliefs are distorted by faulty perceptions.**	**Motivation Biases** **People's motivations and incentives tend to bias their judgments.**	**Errors in Reasoning** **People use flawed reasoning to reach incorrect conclusions**
People: - Become attached to the status quo (see the status quo bias) - Value things more highly if they already own them (see attachment bias) - Ignore information inconsistent with their current beliefs (see the confirmation bias) - Fail to learn and correct their beliefs despite strong evidence that they should do so (see the representativeness bias) - Keep doing the same things, even if they no longer work well (see the conservatism bias) - Distort their views of reality in order to feel more comfortable (see the optimism bias)	People: - Anchor on information that is readily available, vivid, or recent (see anchoring bias and recency bias) - Make insufficient adjustments from their initial anchors (anchoring bias) - Ascribe more credibility to data than is warranted. - Overestimate what they know. (see the overconfidence bias) - Underestimate the effort involved to complete a difficult task (see the overconfidence bias) - Give different answers to the same question posed in different ways (framing bias)	People: - Unconsciously distort judgments to "look good" and "get ahead. - Take actions as if concerned only with short-term consequences. - Attribute good decisions to skill, bad outcomes to others' failures or bad luck. (see the self-attribution bias) - Escalate commitments to avoid questioning earlier decisions. - Favour actions that shield them from potentially unfavourable feedback.	People: - Simplify inappropriately. - Are persuaded by circular reasoning, false analogies, and other fallacious arguments. - Are surprised by statistically-likely "coincidences." - Base the credibility of an argument on its manner of presentation. - Abhor risk but seek bigger risks to avoid a sure loss. (see risk-aversion effect) - Cannot solve even simple probability problems in their heads.

Source: Lee Merkhofer Consulting

Chapter 4

Using Behavioural Finance in Building A Client's Portfolio

- As we have discussed, anything that helps the advisor understand each of his or her clients better to determine as much as possible about the client's individual financial goals and expectations and ability to handle risk will enable the advisor to do a better job of counselling those clients.

- Often, the advisor administers a questionnaire about risk tolerance, discusses the client's goals and possible financial commitments, and suggests setting up a balanced portfolio that takes into account their goals and risk tolerance. Many advisors employ a mathematical formula called mean-variance model optimization for this purpose, but the formula that takes the client's age away from 100, in order to determine what percentage he or she should hold in equities, would also be useful (e.g., sixty-year-old client should hold no more than 40 per cent in equities)

- However, Michael Pompian, in *Behavioral Finance and Wealth Management* and Pompian and Longo in "Incorporating Behavioral Finance into Your Practice" (see bibliography), suggest that the client's psychological preferences may mean that a "best practical allocation"arrived at by a formula might not necessarily produce the best portfolio for a particular client (though even they do not recommend a variation of more than 20 per cent from the mean-variance-optimized allocation).

- A client who shies away from risk may need to take more risk to achieve his or her goals, and therefore needs to be pushed slightly beyond his or her risk comfort level.

- As Pompian says, "the right allocation is the one that helps the client to attain financial goals while simultaneously providing enough psychological security for the client to sleep at night."

Bias Diagnoses and Asset Allocation (Pompian and Longo, 2005)

- Pompian and Longo lay down two principles for putting together a portfolio that demonstrates "a best practical allocation in light of behavioural biases."

- They stress that these principles are not absolutes but are general enough to fit most situations and should be used along with other data on the client, such as goals, risk profile, and any asset class preferences.

- The principles addressed by Pompian and Longo provide a guideline for dealing with decisions about when to adapt and when to moderate:

Principle I: Moderate Biases in Less Wealthy Clients; Adapt to Biases in Wealthier Clients

  - the thinking behind this principle is the impact that investment decisions will have on the client's way of life
  - clients with limited resources could face real financial stress and diminishment of their way of life if a biased investment decision erodes their financial position
  - the advisor should seriously consider trying to minimize the effect of any client biases in assembling the portfolio
  - on the other hand, a wealthy client could take a loss with relative ease, and emerge without compromising their quality of life
  - in this case the advisor can more reasonably adapt to client biases

Principle II: Moderate Cognitive Biases;Adapt to Emotional Biases

  - the thinking behind this principle is that cognitive biases which stem from faulty reasoning (both the errors arising from self-deception: overconfidence bias, optimism bias, ambiguity bias, self-attribution bias, confirmation bias, hindsight bias, cognitive dissonance, and conservatism bias and those arising from mental shortcuts: mental accounting, representative bias, framing, the anchoring and adjustment bias, availability bias, and the recency bias) can more easily be corrected by information and advice

- on the other hand, since emotional biases (the endowment effect, status quo bias, attachment bias, loss-aversion bias, disposition effect, risk-aversion effect, the herd effect and break-evenitis) are often not conscious, they are harder to rectify

- In some cases, the advisor may decide that he or she must consider both principles, to produce a blended approach
- For instance, the advisor may try to reason with intelligent and wealthy clients, but adapt if they insist on sticking with their own choices
- The advisor may also try to moderate the emotional bias of a less wealthy client, but finally adapt, reasoning that they have saved the client from at least some of his or her potential losses
- It should be noted that Pompian and Longo do not recommend moderating or adapting the asset allocation more than 20 percent from the mean-variance output
- The Life Cycle Hypothesis is an unspoken consideration throughout.

Some Sample Cases

Note: In the works by Pompian and Longo, actual asset proportions are given, based on the mathematical calculations of mean-variance optimization. (The same principles can be used using the common formula in which the client's age is subtracted from 100 to determine the percentage of equities in the portfolio.)The following examples are meant only to demonstrate the principle of their approach and do not recommend asset breakdowns.

Mrs. White is a relatively young widow of fifty-five. Her businessman husband has died suddenly of a heart attack, leaving her traumatized and very nervous about the future. Although it is unusual for someone of her generation, she took no part in handling the family finances, and has not been in the work world for many years. She grew up with parents (still living) who remember the Depression and have constantly watched everything they spend. They instilled in her a fear of financial risks and debt. She is now reading the news of stock market losses with horror.

She and her husband lived well, and had just finished paying for the education of their four children, thinking they would ramp up their savings during the next fifteen years. Now she has only her husband's insurance and some relatively modest savings to pay her an income. She is taking a word-processing course to allow her to return to the office work she was doing when she married.

Considerations:

- Mrs. White is terrified of losing what she has (loss aversion), and her childhood taught her that money was hard to come by and easily lost (selective memory; risk aversion)

- she is convinced by the newspapers that the economy is taking a nosedive (recency bias)

- she has only ten more years to work (if she gets a job), and the office work she is planning to take up is unlikely to pay enough to make up for any shortfall in her savings

- as a relatively young woman with the likelihood of at least 25 years more to live, she stands in considerable danger of outliving her money

Conclusions:

- Mrs. White's emotional bias against risk is deeply ingrained, as is her fear of loss
- on the other hand, her quality of life is seriously threatened, especially in her old age
- an advisor, who might adapt to an emotional bias like loss aversion in a wealthier client, must try to moderate it in Mrs. White, in order to edge her in the direction of balancing her safer assets with some more aggressive investments that will increase the money in her portfolio before she has to depend on it
- providing information to Mrs. White could eliminate her recency bias

Mr. Willows, sixty-eight, is a well-to-do manufacturer, who has sold the family company for a good sum; none of his children were interested in taking over the business, and have established profitable professional careers of their own.

In retirement, he fills his days reading the financial pages, drinking coffee and discussing investments with his retired buddies. They have been watching the surge in mining stocks for some weeks, and friends have made some very nice profits by jumping in at the beginning. Recently, several of those friends have come in trumpeting the news of a mining stock that they heard about on a financial website.

Mr. Willows has come to see his advisor, asking that an amount larger than his usual purchases be put into that stock. In fact, he's upset that he didn't listen to his friends earlier. He's hoping that some hefty gains will allow him to leave even more of an estate for his children.

Considerations:

- Mr. Willows is clearly influenced by his friends (herd mentality)
- he has been bombarded recently with bullish news about mining stocks (recency bias; availability bias)
- he is convinced this company will do well, because mining stocks are strong at the moment (representativeness bias – mining stocks are doing well; this a mining stock; this stock will do well)

Conclusions:

- Mr. Willows's own life is not going to be drastically affected by a loss, and his family is still going to inherit a significant sum
- also, most of Mr. Willows's biases are cognitive errors
- the advisor might, therefore, both adapt to his herd-mentality thinking and moderate other biases by providing information and advice
- encourage Mr. Willows to look more closely at the company, examining any prior returns and company figures to determine if the stock has a solid basis
- the advisor might also partially adapt, by putting some money into the stock, but convincing Mr. Willows to reduce the amount

Mr. and Mrs. Street are a young couple just starting out. Mrs. Street is starting a career in public relations and Mr. Street is articling for a large law firm, and has been led to believe he will be have a position as a junior associate with the firm in the near future. They are determined to buy a house as soon as possible, with hopes of starting a family in a few years. To that end, they have been putting as much money as possible every month into a savings account, earmarked for that purpose, and are proud of the sum they have managed to build up.

Because of this, they sometimes run short, and have been putting daily expenses on their credit cards. Lately, they have realized how much debt they have built up. They are suddenly having trouble paying off the minimum amount each month.

Meanwhile, Mrs. Street has recently inherited some blue-chip stocks from her grandfather. In fact, the stocks are in the prestigious company for which he worked all his life. He had always indicated to her that they were solid and reliable, and he meant them as a sort of emergency fund for her protection.

Considerations:

- Mr. and Mrs. Street are losing excessive amounts paying the 18-per-cent interest on their credit cards, while they preserve – and add to – their saving account (mental accounting)
- Mrs. Street is seeing very little growth in her stock, but she treasures it as a last gift from her grandfather and a connection to his life (attachment bias and the endowment effect)

Conclusions:

- mental accounting is a cognitive bias; the advisor could therefore appeal to reason to convince the Streets to pay off their credit-card debt as soon as possible and end the interest drain

- he or she could point out the fact that their finances are interconnected, and some of their savings could be used for this purpose

- on the other hand, their hope for a house and Mrs. Street's attachment to her grandfather's stocks have emotional components

- the advisor might suggest that some of the money in the account be used to start an investment portfolio, acknowledging the couple's goal by working out a planned timetable for growth that leaves them with hope of achieving that goal in a few years – aided by their increased salaries

- the advisor might adapt reasonably to Mrs. Street's emotional attachment by not suggesting her "nest-egg" go towards the debt-repayment, but by showing her the lack of growth in her stock and the possibilities of growth in other (solid) investments

- the advisor could also introduce the thought that she can honour her grandfather's intent without keeping the same stocks, and then leave her to consider this

Chapter 5
General Case Studies

Case 1: Examples of Client Investing Personalities

Tony Grenada was an IA for Personal Brokerage. Personal was located in a small but rapidly growing community about three hours north of a major Canadian city. Tony had two clients in particular with different personalities but pretty well invested in the same stocks.

One of the reasons for their similar portfolios was that they both worked in the pharmaceutical industry and most of the stocks chosen were in that industry.
Brad was the older of the two investors. His age was in the early fifties. He had taken a Portfolio Investment Management adult education course at a major university for his own interest. Tony was the course instructor and when Tony became an IA, Brad quickly signed up as a client, because he had been impressed with the way Tony taught the course and explained investment concepts.

Brad owned two pharmacies in the major Canadian city and was relatively wealthy.

The second investor was Carl, who sold pharmaceutical supplies to Brad's stores on behalf of a major Canadian distributor. Carl was certainly not as wealthy as Brad. He was in his late twenties and was still living at his parent's home.

At Brad's urging, Carl was introduced to Tony and became a client.

For the first year Brad and Carl were clients, the pharmaceutical stocks they invested in performed well in that they outperformed the market overall and two of the stocks had doubled the market return. Brad always claimed it was because he knew the pharmaceutical business and could tell when new products were going to do well. Carl nearly always followed Brad's recommendations, and the only time he did not was because of his lack of funds.

Tony, Brad, and Carl often played golf together at Brad's course – and at his expense. Tony was often invited to Brad's summer cottage and got to know his wife and children as well.

After one year, Brad told Tony that he had talked Carl into investing heavily ($10,000) in a new issue coming out from a new Canadian company entering the cancer research field and would be selling types of drugs for the treatment of various cancers.
"It can't miss, "Brad explained. "We should be able to sell our stock in a couple of weeks for a handsome profit."

Tony advised Carl not to invest as much as Brad, and did so in a letter stating that the amount Carl was going to invest was not suitable for his current portfolio and his risk parameters. Carl went ahead anyway and invested $10,000, which was just over 50% of his portfolio. The $10,000 Brad invested was under 10% of his portfolio.

Two days after the new issue went on the market, the stock plummeted from $10 to under $5 on bad news in a medical journal about the types of drugs the new Canadian company was selling. Both Brad and Carl sold out their holdings. Brad wasn't too upset and simply said, "You can't win them all." Carl was very upset and called Tony's manager to complain about the terrible stock Tony had put him into. When Tony's letter advising Carl to not invest as much money in the stock was produced, Tony was exonerated, but met with Carl to change his investment policy statement and put in more guidelines for less risky investments.

An analysis of the two personalities with reference to the five different profiling models.

The Barnewall Two-Way Model

Brad was certainly an active investor in that he was wealthy, built his own business, was willing and able to take risks, and did not want a good deal of diversification. Tony let him have his way and processed any orders Brad requested. Any trades that were not on the brokerage firm's approved list were documented as "unsolicited orders," as per the firm's policy. As an active trader, Brad provided Tony with a decent stream of commissions.

Carl should have been more of a passive investor in that he was not wealthy, wanted to hang on to his money, but did not diversify enough. Once Tony sat down with him and redid his investment-policy statement, Carl's portfolio did become more diversified and Carl began to listen to the advice of Tony, his advisor, more often.

The Bailard, Beihl, and Kaiser (BBK) Five-Way Model

Brad combines personality traits of an Individualist and Adventurer in that he tends to be confident and is overall a successful investor. He would often ask Tony to provide information on companies available through the various wire services to which the brokerage firm subscribed.

Tony was pleased to track any news on companies in which Brad had holdings. Tony used the services of the firm's library, which had an excellent system of tracking company news on behalf of the IAs.

Carl is somewhat of a Celebrity in that he often wanted to do just what Brad did and did not have confidence in his own ability to make good decisions. It was not until a second investment-policy statement was drawn up that he had well-defined goals. Carl became more of a Guardian, but he did not take an inordinate amount of time to make a decision. He welcomed suggestions from Tony. He still held many of the stocks that Brad did, because they were improving in price and receiving regular dividends, which could be reinvested in more conservative stocks and mutual funds.

Life Cycle Investing

Brad does not "fit the mould" in that he is somewhat more risk-averse than he once was, but is still willing to take on more risks than someone who is concentrating on retirement and estate planning. This is probably attributed to his wealth. He always claimed he could sell one or both of his stores and the proceeds would give him more than enough for a comfortable retirement and solve any estate-planning needs.

Carl does fit into The Early Earning Years category because of his age and the fact that he had a few short-term goals (e.g., get his own place to live), but became tolerant of risk in that his second investment policy statement had an asset mix of 80% in stocks and higher-grade mutual funds. He also started a RRSP and reinvested the tax savings. He was on track to get his own house in five years time.

He would put any excess cash in T-bills because they were providing a higher return than he could get at his bank. Even money that was sitting in cash was earning more than his bank was paying. At times, he would use this cash and market money to purchase a new stock and/or add to his RRSP.

The Nine Money Personalities

Brad was an Entrepreneur. He was more interested in keeping score and enjoying his successes in picking stocks than in the actual percentage performance. He was motivated by excellence in picking stocks and running his business. He was somewhat a high-maintenance client, in that he enjoyed talking to Tony at length about various investments and investment news. This did not take away from Tony's time with other clients, because these discussion usually took place on the golf course or when Tony was invited over to his cottage on the weekends. During the daytime, Brad was too busy running his own businesses to spend much time talking on the phone with Tony.

Carl showed the characteristics of a Hunter. He had a strong work ethic, but did not have the same confidence in his investment ability as Brad, which is why he often followed Brad's lead. He also showed characteristics of a Producer, because of his work ethic and lack of confidence. His investment knowledge was just in the learning stage and he could not evaluate risks and rewards properly. Once a new policy statement was drawn up, Tony took the time to explain more about investments to Carl. Carl was also reading the financial sections of the newspapers, and if he had any questions, he would ask Tony. This helped increase his investment knowledge. He also joined in discussions that took place on the golf course when he played with Brad and Tony. All of these things were making him more knowledgeable, and he was beginning to take on some traits of an Achiever, in that he was more conservative and wanted to protect his assets. He was also becoming more of a Money Master in that he felt more secure now that he had a more balanced financial approach. He enjoyed having a part in the handling of his investments but was always open to Tony's advice.

The Psychometric Profiler

Brad is classified as both Technical and Busy. He looks at price movements often and trades actively. He is constantly reading about companies and hears rumours that are taken into account in his decision-making. In some cases he acts on emotion by buying something on a "hot tip," but he has no trouble getting out of a bad investment or cutting losses.

Carl was classified as Emotional in that he was influenced by "hot tips" from Brad and acted on gut feelings. He became more Casual after the new investment-policy statement was drawn up. He concentrated more on his work and listened to Tony's advice much more. He was becoming more informed as he watched the markets and the economy and was always ready to ask questions of Tony if he did not understand something. He enjoyed reading the assessments of companies, and of their stocks and mutual funds, which Tony sent to him.

Case 2: Example of Psychological Biases

Elaine, age 31, was an IA in a relatively small city where she worked at the only office of Roller Coaster Investments.

Elaine met Gail, a single dentist in her mid thirties, at a charity event in which she was involved. Eventually Gail signed on as a client of Elaine's and transferred all her mutual-fund investments to Elaine.

After receiving the transfer, Elaine met with Gail and pointed out she held too many funds. Not only was she incurring extra fees because of this, but many of the funds had the same investment objectives, plus some of the funds had performed poorly over the last few years.

Gail was reluctant to sell any of the funds for the following reasons:

- When first purchased, Gail was convinced all the funds were unique and would do well over time.
- Overall she was pleased with the return on her portfolio, because it was keeping up with inflation.
- Some of the funds specialized in investing in certain metals with which she was familiar, because she used them in her dental practice.

An analysis of the Psychological Biases

Considerations and Conclusions

Gail showed classic symptoms of Emotional biases such as the Endowment Effect and the Attachment Effect (she felt familiar with some of those investments even though more than two funds held approximately the same companies).

She also showed symptoms of the Status Quo Bias and Attachment Bias, in that she was reluctant to make any changes to her portfolio of funds.

Elaine overcame these biases by pointing out the money Gail would save on management fees and by illustrating that, by selling similar funds, she would not change her asset mix but would have the same objectives for the portfolio.

Over time, Elaine was able to lessen Gail's Loss Aversion Bias and Gail began to have more confidence in Elaine's recommendations. Gail said that this was because they were always explained very fully and clearly. This was something she had not experienced with her previous broker.

When talking about her past investment experience, Gail showed both forms of regret (i.e., regret of commission and regret of omission). She often mentioned that she should have bought some of the funds later or sold them rather than holding onto them. She also mentioned a few funds she wished that she had bought, especially after reading what funds had performed well over the past month. Elaine pointed out that Gail's investment time frame was long term, in that she was investing with a retirement date of over twenty years in mind. Wanting to make investment decisions based on monthly performance demonstrated "myopic loss aversion." By sticking with her set course of action regarding value, and having largely a buy-and-hold strategy, Gail would achieve her main investment goal of having enough money for a comfortable retirement, which included a lot of travel.

Elaine implemented a stop-loss rule, in that any fund that had lost more than 20% over a five- to six-year time period (the average time of a business cycle) should be liquidated and incur no (or very small) redemption fees.

Case 3: Example of the Disposition, Risk-Aversion, and Break-Even Effects *(pages 28-30)*

Shirley was constantly calling her broker, Ted, and asking him to sell stocks and mutual funds that had performed well (i.e., were trading above the purchase price). If a stock or fund had gone done in value but had now gone back up to the break-even price, Shirley usually wanted those holdings sold as well. If a stock was going down she was reluctant to sell it while it was in a losing position, always maintaining she wanted to wait until it was in positive return mode or at least at a break-even position.

Considerations and Conclusions

Shirley showed the symptoms of three effects (the Disposition, Risk-Aversion, and Break-Even effects). Ted had to constantly remind her that it was not a good time to sell if the holding was still charting upwards and so was the market. However, Ted said he would never try to time the very peak of a bull market and if there were other investment opportunities for the funds, he would sell. If Ted and other analysts were predicting a bear market, the funds would go into T-bills or defensive stocks such as utilities and banks.

In order to convince Shirley to sell losers, he got her to agree to a stop-loss rule of selling any investment that had lost 20% of its value. Ted pointed out that psychologists have found that investors feel twice as much pain at a loss as they do pleasure in a gain. This “prospect theory” means that it is only natural that Shirley reacts this way to taking losses. He told her that having “Break-Evenitis” was not a sound investment strategy. The funds could be better used elsewhere. After nearly a two-year time period, Shirley was convinced, because she was able to see the benefits of this stop-loss strategy.

Case 4: The Herd Effect (page 31)

One of the most commonly remembered examples of the herd effect was a few years ago when Bre-X, a Canadian gold exploration company, was the darling of the stock market and was rapidly rising in price due to reports of a massive find of Gold in Indonesia. The example of "noise" was prevalent, because some stock analysts, so-called gold experts, and others were asserting that the gold discovery had been proven and the small Canadian company was going to become a world leader in the mining and selling of gold. The stock had gone from $2 to over $120 before news broke that the discovery was bogus. The stock became worthless within six months.

Another example of a "hot stock" was a Canadian company that had developed a fuel cell that could burn hydrogen and would revolutionize the automobile industry by making all cars more fuel efficient and relieving their dependence on gasoline. Over the course of a few years, the price of the stock went from $20 to over $120. The stock split and continued to go back up over $100. When it was discovered that the new efficient system could not be implemented cheaply, the stock quickly fell in price to under $2.

Considerations and Conclusions

In the case of Bre-X, not every analyst was touting this company's stock. Many said there had not been enough independent research done. When controversy surfaced, such as Indonesia's own government wanting to change the rules regarding ownership of the discovery, and more analysts were calling for more research, many astute IAs sold their clients' stock at between $70 and $80. Many other IAs refused to buy the stock, claiming it was too late to invest in the company to make any meaningful profits. After the stock plummeted, the "hindsight" of these IAs were rewarded.

In the case of the efficient fuel company, again not every analyst was calling the stock a definite buy. The fact that the price of the stock performed well over a few years before falling had many investors wanting to get in.

The best defence against buying the stock was that it was too late, which over time has proven to be the best reason for not investing after a stock has had a tremendous run up in price. Advisors still need to follow the action of the current stock "darlings" in order to inform investors as to what is happening in those industries and in other companies in the same industry. If a stock has done particularly well, there is often another company in the same industry which is poised to do well.

There have been some "hot stocks" that have paid off very well but, over time, most "darlings" that have seen spectacular price rises are only going up due to the investors' herd mentality.

Case 5: Examples of Cognitive Errors (page 32)

Lou sat on the pension committee for his company's pension plan. The plan had over $20 million in assets and was managed by Robson Investment Management Ltd. (RIM). Today they were meeting with Denise, the experienced portfolio manager for their balanced fund. She had been the main manager of the fund since RIM took over the account five years ago. Over the past year, the fund had a return of 14.25%, which was over the Canadian stock-market return of 13.2%, and the fund was ranked in the second quartile of all balanced pension funds measured.

Over the past year, Lou had started to choose his own stocks for his RRSP and, though had bought only three stocks, his RRSP had a return of 19.3%. Lou mentioned this in front of the committee and asked how he, a relatively, inexperienced investor could outperform an experienced investor like Denise, who had many more resources behind her through her company, RIM? He asked if RIM wanted to consult with him in the future about what stocks to buy? He claimed his own research was better than RIM's.

Considerations and Conclusions

Lou had an overconfidence bias and demonstrated the illusion of knowledge and illusion of control. He is also demonstrating the optimum bias by suggesting RIM consult with him. The self-attribution bias is also displayed by Lou, as he believes his results stem from his own skill and knowledge.

Denise congratulated Lou on his one-year gains but had to politely point out that the company's pension plan was a balanced fund that had fixed income and cash holdings as well as foreign equities. She also had to point out that his returns were for only one year, whereas RIM had consistently outperformed the appropriate benchmarks that had been established for the fund over the past five years. Another member of the committee also pointed out to Lou that the pension plan of over $20 million needed more diversification in holdings than his RRSP.

Appendix: Example of Dollar Cost Averaging

This example is useful when trying to show a client the advantages of dollar cost averaging.

		Fund A				Fund B			
Period	**Invest**	**Unit Price**	**# Units Purchased**	**# Units Held**	**Total Value**	**Unit Price**	**# Units Purchased**	**# Units Held**	**Total Value**
1	$100	$4.50	22.222	22.222	$100	$4.50	22.222	22.222	$100.00
2	$100	$5.00	20	40.222	$211.11	$4.00	25	47.222	$188.89
3	$100	$5.50	18.182	58.404	$321.22	$3.50	28.571	75.793	$265.28
4	$100	$6.00	16.667	75.071	$450.43	$4.50	22.222	98.015	$441.08
5	$100	$6.50	15.385	90.456	$587.96	$5.00	20	118.015	$590.08
6	$100	$7.00	14.288	104.744	$733.21	$4.50	22.222	140.237	$631.07
7	$100	$7.50	13.333	118.077	$885.58	$6.00	16.667	156.904	$941.42
8	$100	$8.00	12.5	130.577	$1,044.62	$5.50	18.182	175.086	$962.97
9	$100	$8.50	11.765	142.342	$1,209.91	$6.50	15.385	190.471	$1,238.06
10	$100	$9..00	11.111	153.453	$1,381.08	$7.00	14.288	204.759	$1,433.31
11	$100	$9.50	10.526	163.979	$1,557.80	$7.50	13.333	218.092	$1,635.69
12	$100	$10.00	10	173.979	$1,739.79	$9.00	11.111	229.203	$2,062.83

Fund A has a $539.79 gain on a $1,200 investment for a 44.98% gain.

Fund B has a $862.83 gain on a $1,200 investment for a 71.99% gain.

Therefore: Even though the value per unit of Fund A is constantly increasing (unlike Fund B), dollar cost averaging can lead to a larger gain on Fund B. Volatility should not discourage an investor, as long as the general trend is upwards.

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