

V. Personal Risk Reduction Processes

Chapter 10. Recognizing Personal Behavioral Biases and Risk Tolerances

*“It is not in the stars to hold our destiny,
But in ourselves.”* Julian Caesar
- William Shakespeare

Key Points

- Risk tolerances vary with circumstances
- Align wealth goals with risk tolerance
- Measure biases; mainly at transaction time
- Improvement aides; checklists and habits
- Written transaction analysis; develop a process to correct poor personal biases

Section II, *Nature of Risk*, and specifically Chapter 4, *Behavior Biases; Emotions, Logic, Brain Observations*, analyzed personal behaviors. Recognized biases are prejudices to be modified. Here the changing nature of a household's personal wealth biases and risk tolerances are considered. Decision making and plan execution are vulnerable to negative biases. Adjustments and improvements can be made based on thoughtfully measuring biases with simple checklists. Good transaction analysis techniques are proposed to limit the impact of future common errors. A few good habits (i.e. virtues) to control specific vices are suggested to improve negative behavior tendencies. The main idea is to align achievable wealth goals, objectives, and strategies with positive behaviors and a stable risk tolerance level.

Personal Biases – Unique and Abnormal

Human actions may be categorized and are normally predictable. Yet, just like investment markets that reflect human behaviors, individuals are only predictable, until they change their patterns of actions. People either exceed their capacity to remain predictable or they are overwhelmed by unknown issues. Thus complex emotional (reflexive) and rational (reflective) behaviors change. The unknown issues also seem to increase irrational responses, so that reactions are not easily quantified. It is little wonder that event impact normal distributions, which modern portfolio theory relies on, are questionable. Major upheavals are faced often in the hearts and minds of individuals. Hence, their risk tolerances vary with circumstances.

Stresses and Strains

Each individual ignores or responds to stresses differently. If no risk is apparent, then an issue may be ignored. Yet, circumstances can change risk tolerances dramatically. The leaking kitchen faucet on a pleasant spring Saturday morning may be ignored. Yet, on a winter Tuesday night prior to a business trip with a dozen unsettled issues, the idle thoughts of possible water damage may be the last straw of stress. The leak must be fixed at extreme expenses of precious time and effort to prevent the imagined risk of damage. Risk tolerances change with stress levels. Seemingly simple investment decisions can be difficult under stressful conditions.

Personal Examples – Stress related tolerances

The Martinez and Merton households were introduced in Chapter 5. One household is a middle class family with children (young adults) in their early 20's and parents approaching retirement. The other household is a potentially more affluent family with younger children. They likely feel both similar and contrasting risk related stresses in the following examples.

Robert Martinez is aware of a business recession affecting his brand name food supply business. The business slow down cut high profit margin product sales by 10%. All things considered, many businesses are suffering larger downturns. Anita's position as a school district administrator is secure. Yet she is worried by her parents' endless stories of 1930's depression hardships.

Anita is likely to feel her parents' anxiety, even though her circumstances differ significantly from their childhood conditions. Since she has a school district defined benefit pension plan, Anita has no decision options to express her reduced risk tolerance. Her pension cash flows are secured by her employer's resources. Yet, she may complain to Robert about his 401K plan risky balanced blue chip stock and bond investments. Robert must make some decisions. If he believes that his investment risks are tolerable (even after they declined 15% in value during the past year), he may plead with Anita not to worry and hold his investment positions. On the other hand, he may decide to keep household peace and transfer his 401K plan assets to less volatile, more secure money market funds. That reflects reduced household risk tolerance under mild economic stress.

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Terrance Merton faces small business uncertain stresses directly. At age 35, he has experienced relatively few “bet the business” decisions. However, business is currently increasing in the midst of a major aerospace aircraft development. He looks to take out a large loan and increase his automated specialized metal parts fabrication and assembly capacity. Carolyn is cautious and suggests an incremental approach to purchasing equipment and bidding on larger, complex orders. The household stresses are normal and predictable. Carolyn’s risk tolerance decreases. Terrance makes the final decision using his higher risk tolerance to add sizeable debt leverage to the business. If Terrance wins the development contract and it is not cancelled under various scenarios, then with a little luck his business will grow. Carolyn should remain the counter balance in spite of stress related to Terrance’s entrepreneurial risk tolerance. The combined household risk tolerance will likely fall, as the business grows, wealth accumulates, and the family prospers. Risk tolerance usually decreases, when there is more to lose (and less time to gain it back.)

Life changing events; such as births, deaths, terminal illnesses, or accidental disabilities; usually cause greater stresses, anxieties, and risk tolerance changes.

Inexperience contributes to tolerance changes

Life changing events are not the only causes of large risk tolerance shifts. Lack of experience often coincides with a “superman attitude” that superior talent assures a high risk tolerance to overcome any challenge. Today’s competitive life casts cold reality on that concept. Men’s college basketball is an example of recruiting the most talented players, as well as coaches, to control risks. If player talent alone was needed, then the coach would not be required to adjust to new game developments. Key players would likely foul out in the heat of high risk emotional situations. Good coaches dampen emotional risks by changing reflexive emotions to reflective strategies and maintain steady team risk tolerance.

Emotional errors are sometimes mixed with incorrect perceptions. Liquidity or convertible cash single-mindedness may be an unnecessary response to a past vivid unfortunate experience. When a household checking account falls below a threshold, risk tolerances may fall quickly. Understanding spending cash flows (asset-

liability cash flow matching) reduces irrational liquidity related tolerance fluctuations.

Pattern seeking limitations

The human rational quest to recognize trends often clouds judgments and changes personal risk tolerances. Trends include clothing fashions, home entertainment centers, and investments. Following trends usually means following the crowd and paying relatively high consensus prices. The process blurs risk tolerances and gives a false sense of security. When the pattern inevitably changes, risk tolerances often change significantly. That results in making bad decisions at a high impact point and not understanding how changed risk tolerances contribute to losses.

Wise Goals, Risk Tolerances, and Wealth

In developing a process for reducing risky behaviors and stabilizing risk tolerance, recall the primary goal is creating Lifetime Wealth Flows. Wealth development and distribution are increased when goals are clearly stated and pursued. The goals should be aligned with risk tolerances. Pursuing aggressive retirement spending and legacy goals, which were discussed in Chapter 5 with a low and variable risk tolerance, is problematic. Achieving combined retirement and family legacy goals requires valued skills, hard work, discipline, a high, stable risk tolerance, and luck. If risk tolerance is not high and steady, then emotions, inexperience, liquidity, or short cut pattern seeking behavior biases will trigger changed plans. New plans (and new uncertainties) are likely to increase problems, unless they are thoroughly thought out to improve the situation.

A stable, low risk tolerance may be acceptable for simple retirement spending distribution goals. The issue is to live within the household’s tolerances and means. The goal prerequisites; work, savings, and investing; remain the same. However, the low risk tolerant household may select a low risk high quality bond portfolio with payouts and maturities matched to spending needs. Alternatively, annuities can be purchased or employer defined benefit pensions can be engaged in. Their effective returns should exceed social security insurance returns on retiree deductions (unless retirees far outlive expected mortality tables). The message is to set up achievable wealth goals and align them with personal complex risk tolerances.

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Risk tolerance variability must be considered, when trying to assess personal risk tolerance. The lowest experienced risk tolerance should be a boundary or lowest common denominator. It is wise to define personal risk tolerance in terms of that boundary. Low risk asset investment returns may seem a bit boring in most cases. Yet high risk asset valuation declines and sales at bargain basement prices will be avoided if prices fall below risk tolerance boundaries. Preserve and slowly grow wealth without panicking if risk tolerances are low.

Cultivating antidotes to behavior biases

Positive behavior attributes to overcome normal human biases were summarized at the conclusion of Chapter 4. A checklist provided a few general investment virtues to overcome natural human vices. Cultivated antidotes correct for changing emotions under stress. Individual processes should adjust to the unique ways each person feels and thinks.

Highly emotional people tend to minimize self discipline. They may view uncertain future events as fates or chance destinies without planning to consider possible scenarios and probabilities. Normal stresses affect their risk tolerances and ability to learn from experiences. Life is a continual roller coaster.

Dogmatic rules-based individuals have a better chance to limit risk tolerance swings. They tend to have the support of self discipline. Yet, their weakness is over focusing on patterns that fit their rules. Often the rules are inadequate for new factors. Stresses and risk tolerance swings still occur, while they try to fit square pegs into round holes.

Risk tolerance understanding should be dealt with first. Thereafter behavior improvements can be addressed. Risk taking, as well as risk tolerance, can be observed and should be estimated in a variety of daily activities. Casual natural activities give simple examples to ponder. The way we play and plan daily activities will usually be similar to the way we seriously develop wealth. Observe.

Games & outings expose important thinking

How do you play a game of cards? Do you try to count cards and figure how your hand and the opponents' hands are going? That implies simple scenario analysis and probability calculations. Conversely, do you watch how others are

responding and playing out their hands. If you play off of the emotions of others, you probably feel less control of the situation. Opponents may be intentionally misleading you or simply don't know how to size up the entire game. The later approach may actually work, if you spot consistent emotional indicators of opponent strong or weak hands. It is an indirect approach with non specific estimates and analysis. For most people, scenario analysis and probability calculations better define risks and allow higher personal risk tolerances.

How do you plan for a 150 mile drive to Christmas dinner? For many United States regions, weather is unpredictable in late December. A drive through part of a major metropolitan area may mean road repairs and detour delays. Weather and road condition information is easily available on the internet. Alternative routes can be plotted. How detailed are your plans? How do you make adjustments? Experience will often identify the most important factors and detailed plans will help decide if and how to proceed with the trip to grandmother or mother's house. An informal risk assessment process takes place. The high risk tolerant family may make the trip, in spite of expected sleet on the drive home. Alternative plans should reduce the risk to an acceptable level of an accident or being stranded. The low risk tolerant family may remember the frustration of getting stuck on a back road in similar conditions and decide to visit and exchange good conversations and gifts on another day, when driving conditions are tolerable. Planning and alternative scenarios support higher risk tolerances.

Card games and trip planning illustrate simple risk estimates or assessments that apply to wealth management. The next step is to approximate risk tolerance during a variety of simple and significant decisions, where human (potential) and financial capital are involved. That is where there is something to lose (skin in the game.) The risk tolerance boundary is where a decision is made to terminate the asset position, because the valuation is unbearable.

Human capital risks are more controllable

Recall that human capital is potential economic wealth based on the present value of future earnings. A third year Biology Major (pre medical school) must decide whether to take the Medical College Admission Test (MCAT) with

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limited confidence or simply void the exam without taking it. That will count as one of three possible annual sittings for the MCAT and there may be logistical reasons for only one other MCAT sittings during the year. The potential physician has a risk tolerance issue regarding human capital. A poor test score may result in not being admitted to a desired medical school after graduating from college. Voiding the upcoming MCAT sitting may leave only one more chance to score an acceptable grade on the exam. In economic terms, the potential lost human capital may be a year's M.D. income after all things are considered. Generally, only the low risk tolerant student would void the exam. Even a poor score provides experience that can be measured and reduces the risk of a below capability score on a future MCAT. The real information of psychological responses during the stressful test and actual weak topic answers show areas to be improved and prepared for. The human capital related risk tolerance can be significantly increased because improved personal performance is more controllable than market related wealth capital valuations.

Identifying Personal Risk Characteristics

Finding unique individual risky traits is useful. An emotionally expressive person should look for felt risky behaviors. Feelings are reflexive and directly relate to investment decision making. They include vices, such as greed, envy, pride, and despair, as discussed in Chapter 4. Identifying the dominant behavior biases involves thorough honest observations of feelings and circumstances at the time of investment decisions.

Checklist Item 1: Estimate value of emotions

A feeling may be expressed in the commonly described loss aversion bias (Chapter 4). Yet, to correct the bias the underlying negative behavior must be discovered. Loss aversion for many people involves pride more so than greed, envy, or despair. Most people just don't like to accept losses, because that makes them feel stupid. It is one thing to avoid feeling stupid, but another to measure the related impact. Real decisions must be made and financial transactions reviewed to know the negative impacts.

For example, a 50 year old man owns a significant 401K Defined Contribution Account. A speculative energy focused mutual fund represents 20% of his portfolio. He does not consider the volatility of the fund and presumes

that stock funds will show positive long term returns similar to the 1980's and 1990's. Taking a loss would rule out a chance that the asset value (including distributions) may rise above his purchase price. He casually monitors quarterly portfolio statement fund holding values and cumulative returns

.
During the past 3 year holding period, the fund was 25% above his purchase price at the end of two different statement periods. At the end of the two most recent quarters, it was 25% and 50% below his purchase price. As long as he holds the mutual fund, his risk and risk tolerance are high. Emotional pride may trap him in a high risk position and reduce his flexibility and portfolio performance. Potentially less likely emotions that may trap him into hold positions are laziness and despair. They were previously discussed as anti-change tendencies. A different rational approach may consider the entire portfolio and sell the energy mutual fund after the 25% loss. That requires a non emotional stop loss criterion to be set at the time of purchase. Identifying emotional biases under stress scenarios and estimating investment impacts are critical.

Combinations of emotions and their impacts can be measured at quarterly intervals as above. Not adjusting an asset position should be an active hold decision with an estimated value impact. The difference in measured quarterly asset returns (including unrealized gains/losses – i.e. at current market prices) defines the risk tolerance related to the dominant emotion. Note, the risk tolerance impact can also be positive, as measured by holding unrealized profits above an asset's estimated operational value or boundary.

Checklist Item 2: Calculate value of short cuts

Rational personal risks are primarily over simplifications that may be due to excess confidence. In legal terms, due diligence is the issue. Think about using a spell checker on a computer document. The process takes about 2 seconds, if no errors are found; but does not result in a 100% acceptable document. A letter from a word may be dropped ("be" instead of "bet") or typed wrong ("they" instead of "then"). The spell checker is an acceptable screen for non critical e-mail messages, but only a starting point for a meaningful document. Similarly graphs can be misleading based on how critical dimensions are selected or the range of data depicted. Optical illusions set up errors. Most data should be used as initial screens or filters for

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our limited rational minds with real biases. Data can also be misunderstood due to incorrect or no references. A single number that earnings are \$10,000,000 less than the comparable quarter a year ago is of little value. Relevant questions are: why, does it matter, what about the future, and what are the risks? Try to calculate the risk and impact of rational short cuts.

Measuring short cut risks is hard. Focus is needed to look for short cut errors, humility is needed to admit the silly errors that were really made, and perseverance is needed to regularly check the impact of short cuts. Security ticker symbols are often 5 characters. Purchasing HAIAX (Hartford Domestic Disciplined Equity large domestic stock load fee fund) is very different from purchasing HAINX (Harbor International large foreign stock no load fee fund.) If you made a similar error, what was the net change in value between the actual and expected fund purchased, after correcting the order? The tolerated risk is measurable. A double check process or only executing transactions when clearly concentrating can be implemented.

The more difficult short cut biases to correct are important items that were ignored in an unprofitable or unacceptable transaction. The loss impact must be measured, before concluding that the process must be improved. Then the critical factor can be looked for, until the “ah ha” moment that a risky short cut is found. Short cuts serve a purpose of not wasting time going through a long bureaucratic boring method. Yet, an acceptable balance must be struck between cumbersome rules that become less valuable with time and continually searching for thorough but stream lined rational processes. The paradox is that the seemingly quantitative rational risks must be reduced by qualitatively searching for, detecting, and eliminating cognitive errors.

Checklist Item 3: Assess value of agents

Life is a series of relationships. Agent relationships are normally needed to implement business or asset transactions. Brokers, attorneys, accountants, and investment advisers are agents, who are trusted to perform their agreed upon obligations. There is risk that they may not perform their task per agreement due to capacity or willingness (conflict of interest) to perform. The task may actually be performed per agreement, but a poor communication process may cause problems. How much risk can you tolerate? If unacceptable performance is

communicated and there is no consideration or future improvement, what do you do? First, it is helpful to measure emotions. If you can't sleep due to the situation, then make the effort to try and fix it quickly. If multiple agent relationships feel precarious, then the process of selecting agents may be careless or flawed.

Agent relationships begin with uncertainty, because relevant information is limited. With experience trust develops. Good people do not necessarily make good client-agent relationships. Cultural backgrounds or current circumstances may prevent the development of trust. It is good to know if behavior biases are different and consider if you can communicate when stress inevitably occurs. Rationally biased people communicate differently than emotionally biased people. They do not necessarily feel your stress (pain). Responses may be appropriate, but delayed when timing feels important. If you make a costly (time stressed) decision based on lacking information, whose fault is it? In some agent relationships, the risk is measured in terms of whether a transaction occurred or not. If the transaction had limited economic value, anything lost is less important than the possibility that a larger transaction loss may occur in the future if the relationship continues. Thus, initial relationships should be of limited value (unless you have no choice and are on a life boat after your ship accidentally capsized.) The value of an agent is measured in the type and significance of a matter that can be delegated. Agent value and risk should be asymmetrical, where the trusted agent max value (possible transaction) far exceeds losses (planned transaction) due to incompetence or conflicts of interest.

Personal Behavior Improvement Process

More value is likely from behavior improvement than possibly profiting from exotic types of asset or arbitrage transaction profits. In a free market economy highly profitable opportunities are few and far between. More importantly, negative behavior biases prevent most people from developing wealth, even if they win the lottery or stumble upon a highly valued lost treasure.

Wealth behavior improvement begins with the checklist measured items above. The examples are simplistic and relate to Chapter 4 discussions. They are meant to act as personal triggers to find dominant behaviors that were likely developed prior to your teen age years, while observing others. The behaviors may be positive, as well

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as negative. The virtue perseverance can get too focused by the rules based rational person. Prudence may be needed to take time to regroup, when the rules are not reliable. Yet, double negatives, e.g. fear and greed, are more likely to require a large amount of prudence to balance between extremes.

Visualize behavior tendencies with scenarios

Visualization is helpful in improving wealth related behaviors, as well as most other potential goals. Basketball players visualize the winning shot and others visualize the perfect conclusion to an ideal event. Here, visualization refers to the wealth related behavior process. That is: consider high stress wealth transaction points and the costs calculated in working through the previous checklist of behavior categories.

Scenarios aid visualizing costs and benefits. Some risky behaviors can be insured against to a degree, such as using fire retardant roof shingles, clearing proximate brush near the house, and buying a related insurance policy, when living in a high fire danger area home. Or the behavior can be changed by deciding to live in a low risk locale and driving to the lovely vista periodically and taking photos. The destructive fire may be visualized in a scenario after one year or after 30 years living in the home. If destructive fires in the area average once every 50 years, then the behavior may not simply be emotional overconfidence that a fire will not sweep down the mountain to consume your home. It may be a rational calculation that the probability of 30 years of desirable living are worth the risk of an eventual destructive fire. Visualizing scenarios is helpful to determine if it worth the effort to change and what to change to.

Economic business scenarios should be similarly visualized. Investment transactions suffer significantly from loss aversion bias. If a broker is dependent on the price of an asset steadily going up in order to have a liquid market, then plans must be made for an inevitable illiquid scenario. Until customer losses are taken to adjust for a lack of demand, no transactions will be made and no commissions will be earned. Is business volatility worth inconsistent income? What is the value of identifying the loss aversion biases? Consider possible reduced commissions as long as the client behavior continues.

Notice the behavior thrill and the degree of control. Short term real estate transactions

(flipping), after property prices rebound above a bottom or demand is simply high, can be profitable. Traders recognize the “game is on” and feel they are in control. But are they? Emotional thrills are often dangerous attitudes. The game is based on price momentum and not operational cash flows. It is easy to get carried away with the emotion and add fuel (leverage) to the party fire, as more properties are bought and sold. No player in the game controls the market and greed is the probable bias involved. Only FRB relatively low cost money keeps the game on. The smart player asks questions and visualizes when the game of musical chairs (houses) will stop. Greed will quickly turn to fear. The NYC cab driver and Goldman Sachs secretary, who bought Miami condos with 5% down payments, will be in over their heads fast. Visualize condo prices falling and the units standing vacant. If they don’t make the mortgage payments, the loan holder may foreclose on their properties, their down payments are lost, and their personal credit ratings will fall.

Post transaction analysis

Transaction analysis should confirm that the dominant negative behavior bias or biases are understood and impact costs are estimated. Making adjustments in the competitive world of businesses and investment transactions is complex, but needed to cope with behaviors. Continued scenario analysis will likely be needed to deal with changing behaviors and challenges in the dynamic business world.

The personal risk reduction process concentrates on how an individual behaves and thinks in preparing for and executing economic transactions. Replacing negative behavior biases with constructive habits has a cumulative value that applies to later discussions of strategies and tactics.

Suggested steps

Record the level of personal focus and similar past research for completed transactions.

Note if you were distracted or unusually busy while preparing for or executing a transaction. It is common to contend with time constraints and make hasty decisions. Yet a tendency to make quick decisions may be problematic. Analyze past emotional and rational biases to find those that personally occurred during time stress.

List specific costly biases.

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Note how your research was done. If the approach focused on finding confirming opinions, instead of original independent thinking, then it will be convenient to blame others. That is an irresponsible bias. The amount of research and interest level should relate to the amount of wealth involved. If you spend more time studying a \$200 cell phone features and applications, than a \$10,000 mutual fund investment for potential purchase, there may be inadequate research and lack of investment interest. It may be worthwhile to spend time developing a trusted investment advisor agent than to try to do boring wealth management.

List the research related short cut biases.

Note the experiences of overextending your resources. Overleveraging assets by using loans that could not cover worst case scenarios should be analyzed. Inadequate time spent to study and recover from controllable transactions may also be the issue.

List the over extension biases.

Consider agent relationships that failed, when trust broke down or critical communication failed. What personal bias related to agent selection and relationship? What relationships were the most costly in terms of lost time and resources?

List the 3 most costly agent relationship biases.

At this point real positive behavior based on constructive biases for life is possible. The concept is to methodically find a positive behavior to replace each specific negative behavior bias. Not only can risky behaviors be reduced, but also less risky, more consistent behaviors can replace (crowd out) the risky, changeable behaviors.

Improve behaviors with constructive habits

Estimating, calculating, or assessing the cost of negative behaviors determines the big impacts to concentrate on.

Focus on big impact behaviors first and replace or neutralize them. Most constructive habits are supported by the virtues of perseverance and self discipline. The supportive process naturally reduces the variability of behaviors and risk tolerances. Experts say that processes must be repeated a few dozen times in order to become

natural and comfortable. That translates to a number of years to noticeably improve wealth management behaviors. Is it worth the effort?

Balancing fear and greed

The most general emotions of fear and greed affect everyone to varied extents. They often overlap due to time dimensions. That is being fearful in the short term, but greedy in the long term or vice versa. Prudence is the balancing virtue. It encourages scenario analysis in order to note personal fear and greed related to the different scenarios. As prudence becomes a habit, fears related to bad scenarios and greed related to other scenarios should be toned down. Added detailed analysis will show other risks involved. That information leads to the hedging strategies discussed in later chapters that reduce risks and fears. Detailed analysis also has the effect of reducing greed to an acceptable level and risk tolerances to a more steady range. Trying to apply Warren Buffett's famous advice of "being fearful, when others are greedy, and greedy, when others are fearful" is difficult in practice. There are multiple fundamental and technical market causes of fear and greed. The habit of prudence should generally reduce the emotions and gradually influence decisions to take opportunities that are available at approximate market extremes.

Contain overconfidence with analysis and humility

Experience and honest, thorough analysis are useful ingredients to break down overconfidence. Good times can potentially last a few decades, if wise supportive government policies exist. They fuel overconfidence as operating businesses and asset transactions are highly profitable. However, the overall productivity of society sets the limits of opportunities for most people. Transaction analysis should use benchmarks to measure if an individual is really beating the market, as well as what risks are being taken to do it. That prepares one to be watching for excesses, bubbles, and inevitable corrections from unsustainable to supportable economic levels. Good period analysis should aid in recognizing luck, being humble, and limiting overconfidence. Similarly bad period markets and analysis should assist in developing stable confidence to cope with uncertainty. Analysis is the key to temper overconfidence and keep risk tolerance within a tight range. Understand that assets may remain over valued and overall over confidence may last for many years such as the roaring 1920's or the dot com 1990's.

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Test the short cuts and change them as needed

Shortcuts efficiently reduce wasted time, as long as patterns remain unchanged and critical factors are considered. However, patterns change and new factors become critical. The first sign of changed patterns and new “rules of the game” are unacceptable operational losses or valuation declines. Operational performance, as noted in financial statements and discussions, should be reviewed when issued to reduce the risk of relying only on market valuations. In the market place, supply and demand relationships can change dramatically within months. Over valued assets (relative to normal operational values) may be held if short cuts are not changed. A habit of measuring market relative performance between asset classes is also useful. Try to estimate if the asset which you hold, is valued at about normal or twice normal valuations. Clear investigation rules are needed, when dealing with volatile high market value assets. The most important habit is to question and understand new factors, which are causing the valuation. The new factors should be included in future short cuts. If you are uncomfortable with market valuations, then pay close attention to related price charts. It is wise to be ready to sell long life assets, when the trend of price movements turns negative. (Assets that are held to maturity for return of principal, such as CDs, notes, and bonds from credit worthy issuers, can ignore short term market fluctuations.)

Methodically record wealth related facts, behaviors, adjustments, and changed results

The above suggestions and checklists for behavior bias improvements require writing the transaction details, feelings, and personal observations down electronically or on a paper document. Making the effort to document the process focuses positive habit development. Quarterly portfolio performance, individual transaction, and related behavior reviews are suggested. Other strategic and tactical reviews will be discussed in the next chapter. Here we are discussing unique personal habits or self discipline to correct normal primarily emotional human behavior biases.

Now we can develop rational analysis tools.

The habit of questioning short cuts separates the serious wealth developer from the casual, usually less successful individuals. It is an important behavior to consider cultivating. However, independently questioning personal behaviors in a balanced way is hard and requires standing

alone from the crowd often. That is the price to be paid for controlling behavior biases and improving performance. Good habits to set a balanced emotional foundation with a known stable risk tolerance have been discussed. The next step is to develop sound rational tools to view asset operational and market performance.

Summary

- Risk tolerance variability can be reduced
- Negative personal behavior biases should be estimated, calculated, and assessed
- A behavior improvement process should be based on transaction analysis focused on the impact (cost) of negative biases
- Build constructive positive habits to address and reduce personal behavior risks and variable risk tolerances

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Chapter 11. Improving Rational Biases

Key Points

- Identify short cuts and impacts
- Distinguish rational from emotional adjustments
- Overcome biases with specific corrections
- Develop a rational portfolio management process
- Monitor results and respond per a plan

Rational biases involve reflective thinking to take short cuts in planning, monitoring, and executing operational tasks and transactions. Added thorough reflective thinking is needed find the causes of unacceptable results and estimate their impact. Here we focus on understanding cognitive mistakes, developing ways to specifically overcome them, and then presenting an overview of a rational wealth management process. Habits that support rational thinking are discussed and a rational investment monitoring approach is suggested to improve future performance.

Good short cuts are built on pondering experiences.

Personal experiences are usually needed to understand what approaches have worked under particular circumstances. That is tying personal feelings to cognitive thinking. The best short cuts are honed from a thorough process that starts with slightly redundant or near certain factors. The redundant factors may be coincident with a secondary issue being completely dependent or related to the primary issue. The sales of a major brand air conditioner supplier in a particular region may be 80% dependent on home construction. If both new home permits and national air conditioner sales are monitored, the national sales information may be loosely related to the regional supplier's future air conditioner sales. Monitoring only home permits is a short cut to estimate future revenue.

In watching market index mutual funds for possible purchase, an investor may screen for performance during the past 3 years, changes in P/E ratios, and the economic performance of companies owned by the index fund. The performance factor (noticing past trends) may be dropped as a short cut because it provides little predictive value in many market conditions. However, the corporate earnings information and changes in P/E may show the direction of underlying fundamental values, as well as

whether the market is paying more or less than normal for them. The example is a simple indication of how cognitive short cuts are useful.

Short cuts lose information value with time.

As with most experiences, short cuts lose their value with time. Circumstances and relevant factors change. During the Great Economic Depression of the 1930s through most of the 1950s, stocks were considered far riskier than bonds. Stock dividends were generally higher than corporate bond yields. Investors used the short cut where stock dividends down near bond yields indicated that stock were over valued and should be sold. However, after the late 1950s investor psychology changed and stock dividends have been generally lower than corporate bond yields thereafter.

The market place also incorporates the short cut as common knowledge so that it loses information value eventually. When the markets go through a long secular bull market period, investors use technical price information to guess when stocks are fairly or attractively valued. A moving average of recent prices, which will be discussed later in the chapter, may be used to establish a buy point. Specifically, if a stock price trades down to its 50 day moving average some investors may purchase the stock in anticipation of a bounce back up in price. The market place notices pattern purchases, and traders scalp away the advantage. Price patterns eventually get noisy and the short cut information disappears.

Be Alert When Using Short Cuts.

Short cuts or even thorough thinking do not lead to absolutely certain results. Otherwise, computers could be programmed to execute the criteria decision points. As long as the expected profits exceed the cost of programming, the machine could replace the investor. Free markets are not that easy. Watch the circumstances during short cut decision making. Paying attention and being alert are valuable traits. More risky decisions with more assets involved require more caution. Foreign small company stocks include a number of risk factors to consider. Prior to purchasing a 30% portfolio weight in a foreign small company stock or mutual fund of stocks, clear thinking is recommended. Note a high risk investment with significant impact, if its value drops 40% during the next 9 months. The extra attention should usually include stop loss sell points based on

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plotting stock prices on charts and watching related foreign economic and currency factors. The suggested alertness is added thoroughness when decision risk impacts are large. There are few free lunches!

Simple rational short cuts using our senses, primarily vision, were discussed in previous chapters. They bear repeating. Optical illusions occur as our pattern seeking minds use short cuts to fill in missing data as we scan documents, instead of being thoughtfully engaged in reading. As mentioned, the spell checker does not catch incorrect words for context. Three dimensional charts are misread on two dimensional paper sheets or computer screens. A year 2006 report is read, instead of the intended year 2009 financial report. Numbers are often transposed (i.e. 538 in place of 583). The list goes on.

The antidote to taking short cuts with your senses is to practice the first lyric line of the 1966 Simon & Garfunkel sappy song *Feeling Groovy* (59th Street Bridge Song) “Slow down, you moving too fast ...” That means being strictly honest and recognize important documents need to be read and reread. If the content does not make sense, then a second reading will probably confirm document or cognitive errors. Getting the facts straight by spending more time initially will likely reduce the odds of relying on bad primary factor data and making costly decisions.

Calculate the cost of rational errors.

Rational bias decision errors are usually more easily defined than emotional errors with related psychological defenses. Analysis can often spot the bad data or missing data that was used to make a poor decision. A full accounting then calculates the impact cost. After the impacts of a few errors are calculated, the determined individual is ready to set up either direct corrections of specific short cuts or boundaries that will limit potential high impact losses. Simple corrections are usually possible to address poor sensing (vision, etc.) of incorrect or incomplete data. Lose boundaries are often needed to limit the impact of over simplifications involving key factors or relationships with others, who are providing the vital information.

Rational habits use different brain functions than emotional habits

Rational behavior bias corrections couple thought processes with new habits. Emotional

behavior bias corrections address related agreeable feelings in addition to the new habits. Rational sensing or over simplification errors often involve limited emotional attachments. If the missing information can be identified, then the reflective part of the brain can adjust to find and use the needed information. It is able to learn lessons from errors. The process does not guarantee immediate better future results. However, persistence and independent investigations are part of good habits to overcome rational biases and specific errors. Emotional biases involve other added brain functions. Fears of losses and regrets cloud the brain’s functions. They act as simple reflexive jolts prior to the brain’s reflective functions. Methodical habits help inhibit hot reactions and give the reflective prefrontal cortex brain a chance to work. Emotional needs for short term thrills or momentary happiness often turn an investor into a speculator, who feels the streak and loses perspective. The emotional thrill turns an approach that may result in wealth into a quest for the “feeling of getting rich.” The individual processes for slowing down, being more thoughtful, and crowding out the emotional feelings with rational habits that still satisfy basic needs take longer (years) to develop. The simple rational thinking (or limited thinking) errors can usually be corrected quicker with good checklist habits.

Specific emotional virtues and habits

Past analyses should make rational virtues straight forward to understand and develop. Thoroughness, independent thinking, and persistence have been presented as cognitive or rational habits. Yet, virtues that address emotional needs are more delicate and take longer to develop. Specific virtues follow.

Prudence balances the rational reflective thinking between the emotions of fear and greed. It involves adaptability, noticing where fear and greed overlap, and filtering out the noise that triggers either emotion. Determination overcomes the emotions of apathy or regrets. For many people developing determination or finding a passion to overcome the reaction of giving up after setbacks are very difficult habits to cultivate. Yet, those are key habits to overcome emotional biases. Seeking safety or security with the crowd consensus is another bad emotional bias. The crowd is only right under conditions where economic circumstances are uniformly productive and policy makers are able

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to make minor adjustments to keep delicate balances in place. Normally, productive societies are competitive and true advantages are exploited unevenly. The crowd overreacts to the advantages and creates excesses or bubbles. Whether the crowd finds security in late 1990s internet stocks or mid 2000s speculative second houses, it is best to stand alone, accept ridicule while others are making short term gains, and independently seek fundamentally sound opportunities. Courage and independence are rarely developed antidotes to the emotional security of the crowd.

Rational Wealth Management Tools

The tools of wealth portfolio management are conceptual and emotionless. The concepts are portfolio construction to achieve individual or household wealth objectives, specific asset selection to achieve cash flow needs at various time frame risk levels, and portfolio adjustments in responses to significant fundamental or market changes¹. The unemotional tools include acceptable operational performance factors, market price noise level boundaries, factor ratios, price and volume charts, and agent performance attribute reports.

Rational Portfolio Management Overview

Human beings are unique and emotional. A number of chapters have been devoted to both emotional as well as rational short cut biases, in order to show human behavior hurdles that must be overcome to economically manage asset portfolios. Markets are made up of human beings, who change patterns and act unpredictably. Short and sometimes longer term noise must be thoughtfully filtered out. Experiences in sizing up an opportunity and a risk are generally received in the school of hard knocks (correcting past process mistakes.)

Portfolio Construction for individual needs

Investment asset portfolios basically implement strategies to achieve objectives. Chapter 5 categorized broad objectives and Chapter 10 reviewed behavior risk controls to develop a stable personal risk tolerance. Individual risk tolerances set the constraints for trying to achieve objectives through portfolio construction. Portfolios constructed within personal risk tolerance boundaries withstand worst case scenarios.

The Martinez family, which is looking forward to retirement with limited investment interests,

has a modest objective of retirement spending wealth distribution and a relatively low risk tolerance. The Merton family has a more ambitious objective of developing a business, passing wealth through the family, and an entrepreneurial risk tolerance with respect to both the business and independent investments. Their portfolios will be constructed to meet very different household needs. Chapter 6 defined wealth planning factors to consider prior to portfolio construction. Life expectancy and retirement investment portfolio spending rates are two of the seven factors to consider.

The Martinez portfolio includes Anita's pension and social security annuity that provide life time cash flows without market asset valuation risks. Prior to retirement, a rational process should anticipate bad scenarios, make general probability estimates, and set general adjustment responses to the unfavorable scenarios. The pension insurer and U.S. government generally have the economic capacity and bear the risk of providing the cash flows. Robert may decide to construct his 401K portfolio for relatively low risk through a larger portion in less risky lower expected return bond funds and a smaller part in more risky higher expected return stock funds. After retirement he may separate his risk tolerance into time dimensions that include withdrawal of very low risk guaranteed return certificates of deposits or short term bonds for the first 5 years. Thereafter, he may adjust his portfolio dimension to match low risk asset withdrawals with near term spending needs. A variety of approaches using bonds, annuities, and possibly reverse home mortgages can be constructed to flexibly meet spending cash flow needs throughout the household longevity time horizon, while adjusting for changing factors. Working within risk tolerance limits crowds out potential emotional panics with rational plans that anticipate various scenarios.

The Merton portfolio construction process is more complex. The wealth goals and objectives span more than one generation. Building a business is usually a focused investment of human capital, as well as economic capital to profitably expand. Setting up a variety of tax deferred defined contribution, defined benefit (pension), and stock option plans to diversify owner and employee compensations is wise. Time horizons for wealth accumulation, as well as cash flow distributions, will determine the total Merton portfolio construction plan.

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Generally speaking, more resources (human and economic capital) will be devoted to the business in early years based on expected returns on capital and relatively controllable risks. As the business matures, wealth diversification into independent passive investments should provide the margin of safety in case the business faces some intermediate term poor business conditions. The independent passive investments can be relatively high risk, high return types, if the time horizon for the cash outflows are farther out. The Merton scenario analyses should be detailed. Their review process should include various skilled team members, such as family and business accountants, business attorneys, and wealth advisors. Many potential risks will exist. The challenge is to know their various risk tolerances and plan to work (and play) within their boundaries.

Specific portfolio asset selections change

The specific asset selection within an asset category should be based on an honest appraisal of ability and special information to bring value to the process. If a household wants to take risk associated with markets, such as stock securities, bond securities, real estate (REIT), commodities, and alternative asset categories, then they should expect to earn long term market returns (less related expenses) at a risk level within their risk tolerance. The rational process is meant to preclude suddenly ending a lifetime wealth plan, when emotions exceed tolerable risks.

For most non-professional investors, index funds of stocks, bonds, real estate investment trusts, and commodities are wise alternatives. The benefits are low expenses and diversification related low risks. The general goal is to achieve nearly market returns at market risk levels. Index funds that are held for long periods (e.g. 10 years) historically have shown over 90% probabilities of higher after tax returns than actively managed funds. Consider the amount of research required to select the 10% of actively managed funds that outperform the related markets. It is possible, but difficult to beat the market returns at a higher risk level associated with the active manager.

The Martinez family, specifically Robert, appears to have a simple 401K asset allocation selection. Remember that Robert has limited investment asset knowledge or interest to learn. A portfolio including an index large stock fund and index bond fund are reasonable suggestions.

The specific proportion (e.g. 50/50) of each fund would be based on Robert's risk tolerance with estimates of expected returns, withdrawal rates at retirement, and retirement spending cash flows.

The Merton family will likely have a wider selection of business opportunity projects and personal investment asset choices. Business investment project selections will most likely be made on an internal rate of return or net present value basis. Tax deferred investments may include foreign stock and bond index funds, as well as small stock, REIT, and commodity index funds. If Terrance Merton makes a public offering of his company, public capital financing opportunities (equity and debt offering) become available. Terrance could also consider selling the company stock, which he earns and accumulates, over time to diversify the family economic wealth. Terrance's efforts are likely more productively used to build and operate his business, instead of gaining the expertise to select the 10% of actively managed funds that can outperform their respective markets in the long term.

Portfolio Adjustment Responses to Change

Developing an unemotional, rational process for portfolio adjustments is far more challenging than rational portfolio construction and specific asset selection. The very basic assumption that rational households are able to regularly save, in order to set aside resources to invest, always remains the first issue. It takes money to make money!

Portfolio adjustments should be made based on changes in a household's economic conditions, investment asset operating cash flow forecasts, market over or under valuations of the assets, and dramatic changes in asset supply and demand. The household economic conditions change abruptly with deaths, reduced human earnings capacity (capital) due to disabilities or skills obsolescence, or terminal illness expenses. Risk tolerances must be reduced to adjust to lower human capital or higher certain expenses.

Investment asset operating cash flow changes are more often negative than positive. Most debt security changes are negative (unless non investment grade bonds are owned and in rare circumstances are upgraded). Credit rating downgrades will usually cause the security price to fall. The cash flow prior to maturity (or call) may remain unchanged. If a default occurs prior

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to maturity, then the value of principal may be reduced. Equity securities, including REIT, operating cash flows are generally more volatile than debt security cash flows. Business conditions and outlooks impact revenues, cash flows, and earnings.

Markets react quickly to expected cash flow changes. If the business condition affects an entire asset class, then an index fund will be directly impacted. The unusual condition occurs during bear markets (greater than 30% market declines). Commodity index funds are directly impacted by the underlying component supply and demand characteristics. They are generally the most volatile asset class. Market over and under valuations of asset classes occur periodically, when the emotions of greed and fear push asset classes to unsustainable levels. During the height of the internet bubble in 2000 and the depths of 2008/2009 financial system bust, markets discounted unsustainable earnings growth and catastrophic illiquidity. The wise investor adjusted to the risks and took advantage of opportunities.

Abrupt changes in asset class supply and demand relate to market bubble and crashes, but are subtly different. They involve the financing of an asset class. When credit is unavailable, no transactions occur. Trust is the underlying currency for credit. One side of the trade does not trust the other side of the trade (counter party risk). Conversely, when trust is unreasonably in supply, then transactions occur that are unlikely to be fulfilled. The defaulted mortgage backed securities and related derivatives are prime examples. The wise investor works to understand the asset cash flow characteristics and avoids assets that are not understood.

All portfolio adjustment tactics have limits

Making adjustments to the above 4 conditions requires attention. Most people do not have the expertise or interest to take rational defensive tactics to avoid negative asset valuations. The tactics require a methodology, which will have degrees of uncertainty. Understanding the limitations of tactics is necessary to improve on a simple buy and hold portfolio strategy. Some tactics are relatively successful at limiting risk, but may not necessarily help long term returns. For example, loss limit tactics can outperform buy and hold strategies, when market volatility is high and the loss limits are set to defend against most of the unfavorable decline. However, when

markets are sideways trending, there is a reasonable chance that defensive sales will be made prior to market price reversals and lost opportunities (owning assets during price recoveries) will result in less than buy and hold strategy performance.

Portfolio asset rebalancing tactics are a different type of loss limiting approach. At the end of a period, such as a calendar quarter, if an asset class weight has changed more than a threshold limit, then the portfolio may be adjusted to bring the portfolio asset weight back to a desire point. Consider a portfolio with five equally weighed (20% each) assets and a 15%/25% threshold limit. At the end of the quarter, one asset falls to 14% and another asset rises to 26% of the portfolio. Each asset would be rebalanced to 20% of the portfolio. Note, if each asset continues in the same directions for the following quarter, then more losses would be experienced with rebalancing than with a buy and hold strategy. Intermediate term risks occur with all tactics.

Adjustment or specific market timing tactics are only effective, if secular market trends are in play and the rational observer has the humility to change tactics if the conditions for trends change. That is difficult to accomplish. Scenario analysis is helpful to estimate when a tactic will result in an unacceptably large loss and what alternate approach can limit the specific tactic weakness.

Keeping Score and Taking Action

Rational investing requires monitoring assets to understand their past operational cash flows and market valuation performance. Quarterly S.E.C. submitted corporate financial statements show the cash flow, accounting income, and asset/liability balance sheet. Specific annual report management discussions & analysis sections and quarterly conference calls indicate strategies and related performance. They provide the most reliable data to use in estimating corporate debt and equity values. Non-security assets usually have prospectuses and year end non audited financial reports available that can be reviewed. The information is less reliable than regulated statements and reports. However, it is more useful than marketing brochures. Spreadsheets are good tools to note trends and estimate sustainable or unsustainable trends.

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Market prices are either above or below estimated valuations. Wider variations between discounted cash flow analysis prices and market prices provide the opportunity to buy assets on sale or sell over priced assets. Full asset class market valuations concentrate on macro economic analysis to estimate asset cash flows in a similar rational process. Again spreadsheets or graphs are rational ways to paint a picture.

The probabilities are higher that an asset's return will be less than in the past, instead of more than in the past. The phenomenon is due to the human tendency to focus on assets after growth trends are fully or over valued. Then there are lower odds that future returns will match past returns. In contrast a smaller group, who seeks to buy low priced stocks, often does not search for good catalysts, which will cause cash flows to exceed expectations. Therefore, tactics to ride with high priced stocks to higher prices and fish for stock at bottom prices both have flaws. Good future cash flow analysis and valuations are rational approaches to cure both short cut biases.

Monitor weekly asset price charts (with related weekly volume if applicable and available) and compare them to benchmark asset prices. Abrupt weekly asset or index fund market price changes on increased volume are clear alerts to investigate operating conditions. Even if you can't find a cause for the change, use charts to find a price where trends will be broken. Those prices may be points to consider for possible sale or purchase transactions, if you are aware of technical speculator decisions tendencies.

Charts are usually better than tables for monitoring and selecting buy and sell tactics

Our pattern recognition brains generally grasp changes more quickly with charts or graphs than tables of data. The key issue is to know what you are looking for and how clearly the graph shows a signal for action. The graph can be as simple as plotting the weekly closing price of a regularly traded asset or security. Using and trying to interpret price and volume charts is generally referred to as technical analysis. Charles Dow is considered the father of technical analysis through a series of article from 1900 through 1902 in the *Wall Street Journal*. General categories of graphs include moving average relative trend lines, support and resistance references, Japanese candlesticks, volatility band references, Point and Figure, and volume confirmation charts. Technical analysis

often combines a number of these graphs. Different types of charts are best suited for different market scenarios, as well as different types of users. When market trends or scenarios change, the probabilities for profitable signals or action points decline. Therein, the weakness of exclusive rigid technical analysis is exposed.

The simplest concept charts, which may be useful to keep score, are summarized. Their strengths and weaknesses are discussed. The summaries are offered to give the reader tools to consider for further study and use.

Trend line data can be graphed as the previous minute, hour, day, week, or other period last asset transaction price. Often associated with a price or volume trend line is a moving average (MA) of the data. For instance, a 40 week price MA adds the weekly closing asset price for the last 40 weeks, divides it by 40, and plots it as the week 40 MA. The next week's MA is calculated with the most recent asset price and without the first week's price, and plotted. A trend line of the actual asset price and MA are both plotted. Some investors consider an asset price falling below the MA trend line to be an alert signal. The simple technique is well known. It gives useful sell signals, if assets or markets are trading in long and large advancing or declining trends. The signals are not useful, when markets are primarily trendless and make relatively short term small (10%) changes. Investors are said to be whipsawed, if they purchase an asset after an advancing signal crossing and then the asset price turns lower. If a declining signal crossing occurs at a lower price, the investor will lose on the combined buy and sell transactions. Simple asset price-MA crossing signals are most useful as sell signals prior to broad market declines, which historically occur less than 20% of the time. Momentum traders use shorter trend lines, such as 21, 20, 14, etc. day MAs with volume MA data to confirm their buy and sell points.

Support and resistance reference lines are defined where asset prices touch, but do not cross the MA by a significant amount. When asset prices bounce off MA trend lines, some technicians see actionable patterns. Since more people purchase assets, instead of sell (short) assets that they don't own, support lines may be useful strategies for secondary purchases of assets in a generally advancing trend after prices drift down to their trend line for a short period. The tactic is best left for the professional trader.

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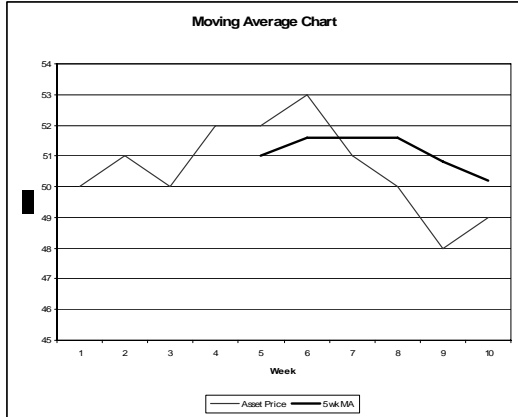


Figure 1. Moving Average Chart

Figure 1 shows a simple week ending asset price chart starting at week 1 and a 5 week moving average (MA) starting at week 5. At week 7 the asset price crossed below the 5 week MA trend or support line. This portrays a simple sell signal. MA trends are used by both short term traders and investors, who combine fundamental and technical tools.

Point and Figure (PnF) charts use the concepts of boxes, box pattern (advance/decline) reversals, trend lines, total market breadth, and relative strength. The box size and often a 3 box reversal concept are used to both limit noisy whipsaw signals and clearly show supply and demand for an asset. The weakness of PnF charts for some technicians is that price is the only parameter used. No volume information is used to confirm the significance of a signal. The general market demand (advancing) and supply (declining) used by Dorsey Wright Associates (and a few others) is the market Bullish Percent (i.e. BP NYSE).

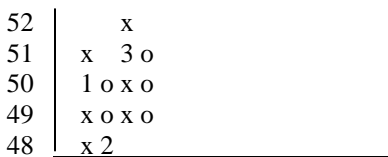


Figure 2. Point & Figure Chart; month numbered

Figure 2 shows a 3 box reversal PnF chart. A box equals 1 point or about 2% price change in this example. The asset price varies between 48 and 52. During month 1 (replaced the 3rd x), the asset price generally advanced, as shown by a column of rising x's (3 minimum). During month 2 the asset price generally fell, as shown by a column of o's. Price reversed up in month 3, as shown by demand with 3 or more x's. No clear

pattern is shown in the example. PnF charts are used by longer term speculators, who ideally hold asset positions for about 6 months to a year and investors, who use fundamental data and PnF charts, to identify potential assets for sale based on relative strength, drops below trend lines (not shown in Figure 2), and weak price patterns^{2,3}.

Japanese candlesticks incorporate daily high and low prices, as well as closing prices in the plotted data. Colorful names are given to patterns of price movements. Speculators are basically looking for short term momentum trades. Mutual fund investors, who only get an end of day fund prices, do not have the information to use the candlestick approach. The tactic is most useful in volatile markets and also best for the professional trader, who incorporates volume information as signal confirmation. No example is shown, although the charting approach is popular with short term (less than a month holding period) traders.

Volatility band traders often use some aspect of price change plots developed by John Bollinger. Hence, we have the term Bollinger bands. The technique plots price movements as bands within which assets trade 95% (e.g. +/- 2 standard deviations) of the time. The bands expand or shrink around an asset price over time frames and thus indicate volatility and potential buy and sell signals. Generally, volatility band trading is best left for the experienced trader. Many traders don't have a good grasp for the significance of volatility as an uncertainty indicator.

For most investors, the simplest charts are most useful to monitor the trend of asset prices. The more complex multiple MA, candlestick, and volatility charts are generally short term oriented. A zero sum game is played by traders prior to transaction and bid/ask spread costs. Very few speculators earn consistent profits in that game.

However, a rational investor may improve his or her process by including price trend monitoring tools, such as MA or PnF charts. These are quantitative tools. They are supplements to monitoring the qualitative or fundamental characteristics of the asset. An intelligent investor may know more about the fundamental attributes of an out of favor asset than the general market. Under those rare scenarios, the market valuation may be below its operational value and

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the rational investor may decide to hold it despite the market's negative trend technical signal.

The Improved Rational Process

The past two chapters focused on improving behaviors through development of a self tailored rational wealth management process. Chapter 10 concentrated on emotional behaviors and risk tolerance. Understanding personal boundaries and striving for a steady risk tolerance during good and stressful times goes a long way toward controlling the most costly emotional behaviors. Yet, a steady risk tolerance and recognizing behavior biases are only part of the wealth development self improvement process.

Chapter 11 analyzed personal rational processes that recognize short cuts and suggested ways to eliminate or adjust and improve them. An overview of a rational Portfolio Management process was then presented. It includes a thorough approach to portfolio construction, specific asset selection, and portfolio adjustment suggestions. Both qualitative and quantitative tools were suggested that may be tailored to the reader's own behaviors and interests. Sound rational wealth management processes result in habits that crowd out normal human negative behavior biases. With interest, self discipline, and perseverance, improved wealth management performance will most likely follow.

Summary

- Understand your short cuts and their costs
- Acquire good habits to thwart weak emotional and rational short cut behavior biases
- Develop a rational wealth management process
- Use qualitative and quantitative tools, that you grasp, to excel in your personal lifetime wealth process

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