Richard Ivey School of Business
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IVEY

910N04

RUDY WONG, INVESTMENT ADVISOR

Jimmy Rogers wrote this case under the supervision of Professor Stephen Foerster solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

On March 6, 2009, Rudy Wong stared out of his office window in disbelief as the rain continued to pour down in Vancouver. Depressing as the rain was, Wong, an investment advisor at O'Hagan Securities (O'Hagan), had even more reason to feel down: that morning the North American stock markets had continued their precipitous decline from September 2008, brought about by the global financial crisis. In the United States, the Dow Jones Industrial Average (Dow) had plummeted to its lowest level of the decade (see Exhibit 1), while in Canada the Standard & Poor's/Toronto Stock Exchange (S&P/TSX) index had fallen to its lowest level since 2003 (see Exhibit 2).

The morning market turmoil had led four of Wong's clients to phone and request urgent meetings. Despite having a diverse range of incomes, ages and asset allocations, all four clients expressed to Wong the same overwhelming fear that the crisis would cause them to lose their investments and retirement savings permanently.

Wong had to decide how best to reassure each of his clients in the meetings: by communicating logical arguments based on his portfolio management expertise and analysis, by managing emotions and attempting to re-establish his clients' faith in the markets or by both methods. He also needed to re-examine the investment strategy he had developed for each client and recommend that they either "stay the course" with current strategies or make changes. Wong knew the outcome of his decisions would impact his professional reputation, potential legal liability and, most importantly, the interests of his clients who had entrusted their retirement savings to Wong and his firm.

RUDY WONG

Wong earned a Bachelor of Commerce degree from the University of British Columbia in 1995, before accepting a position as a financial advisor at O'Hagan's Vancouver office in 1996. He subsequently graduated with distinction from the Certified Investment Advisor Program established and administered by O'Hagan. Over the next 12 years, Wong grew his investor base to more than 500 clients. He credited his

success to his disciplined approach to long-term investment strategies notwithstanding short-term fluctuations. Wong placed particular emphasis on recognizing client limitations and recommending from the best available strategies a customized investment approach to help clients reach their financial goals.

O'HAGAN SECURITIES

O'Hagan was a publicly-traded wealth management company headquartered in Toronto. It created and provided investment solutions as well as capital markets and advisory services. O'Hagan's financial advisory unit offered investors a comprehensive selection of financial services through its network of independent financial advisors.

Investment Advisor Role[1]

The retail investment advisor role consisted of providing comprehensive financial planning and selling securities to retail investor clients. The advisor did so with a view to helping clients optimize the allocation of their financial assets to meet their financial needs. The advisor needed to take into account each client's financial resources and constraints as well as short-term and long-term objectives. In turn, such consideration required the advisor to examine a wide range of factors including a particular client's liquidity needs, disposable income requirements, tax planning situation, investment time horizon and provisions for unusual circumstances. Investment advisors served as all-purpose financial counselors, guiding clients on every conceivable financial event such as how to save money on mortgage payments, saving enough money for a child's college fund, picking the best credit card and providing retirement planning.

One way an investment advisor could add value to a client was by providing a client with an objective point of view. Retail investors tended to be highly subjective and emotional individuals whose psychological temperament could veer rapidly from greed to fear in the wake of rapid market swings. Emotional decision-making had often been observed to lead a client in the short-term to make a decision counter to their long-term self-interest. Multiple sources of information from print, television and the Internet often contributed to the development of misguided biases in interpreting information. The classic example was buying a stock at a high price and selling it at a low price, while the prudent investor aimed to do the opposite. A successful advisor helped manage a client's emotional state of mind by informing a client's decision-making process with logic and providing a historical context. The advisor often served as the mediator between the client's emotions and their objective reasoning in committing to a financial strategy.

Advisor Compensation

Investment advisors were typically compensated in one of three ways: by commissions via transactions, by a percentage of the assets under management (AUM) or through a fee-based system. Advisors at O'Hagan were compensated using a blend of all three, depending on the objectives of the account.

[1] *Much of the discussion in this section is based on O'Hagan Securities' internal research documents.*

Asset Allocation

An investment advisor often added the most value to a client's portfolio by determining the appropriate asset allocation or mix of assets, which typically preceded a security-specific decision. The asset allocation mix served as the core strategic overlay to provide a benchmark before any "tactical" or market timing positioning of securities. The traditional asset classes were stocks, bonds and cash (see Exhibit 3 for historical returns and risk). Diversification benefits were based on the premise that various securities offered returns that were not perfectly correlated, and thus a combination of securities were able to lower the overall risk (in terms of variability of returns) for a given level of expected return (see Exhibit 4). Diversification could occur not only across securities within a particular asset class, but also across asset classes and geographically as well, thereby allowing for the construction of asset combinations with return and volatility characteristics that were acceptable to a range of investors with differing investment goals and risk tolerances.

Numerous academic studies suggested that over the long-run, asset allocation was by far the most important determinant of portfolio performance. For example, two well-known studies by Gary Brinson analyzed U.S. pension fund data and found that over 90 per cent of a portfolio's variation of returns over time could be attributed to the overall asset allocation policy.[2]

Security Selection

Advisors often relied on their firm's internal research to recommend a diversified basket of both domestic and international stocks. The basket of such recommended stocks tended to cover broad sector categories. Each recommended list tended to have 15 to 25 stocks, and the list was usually updated on a quarterly basis or more frequently if an unusual event occurred regarding a particular stock. Advisors tended to take a more active approach with stock selection as opposed to bonds. The typical bond investment recommendation consisted of a bond fund or alternatively a laddered approach of investing in a number of government bonds with different times to maturity, whereby longer-term bonds were purchased as various bonds matured.

Market Timing

Market timing — also referred to as tactical asset allocation — in its most extreme form involved a strategy whereby investors tried to sell securities at the top of the market and buy at the bottom of the market. A more subtle form of market timing occurred when investors purposely deviated from a long-term target asset mix (say, 60 per cent equities and 40 per cent bonds) based on perceived short-term outlook by over-weighting the attractive asset class (say, 65 per cent equities over the next quarter). Academic studies showed, however, that this form of market timing was often quite difficult to implement as stock markets tended to move in unpredictable patterns. It was also often difficult to make investment decisions that were not clouded by media hype, informational bias in interpreting information and other emotional influences. Many advisors consistently suggested to clients that the best way to protect against losses was to spend one's time "in the market" versus "timing the market." While short-term market corrections were inevitable, North American markets tended to provide positive annual returns in over two-thirds of the years since the 1920s. During market downturns, increased communication with an advisor

[2] *See Gary P. Brinson, L. Randolph Hood and Gilbert L. Beebower, "Determinants of Portfolio Performance," The Financial Analysts Journal, 42, 4 (1986), p.39-48, and Gary P. Brinson, Brian D. Singer and Gilbert L. Beebower, "Determinants of Portfolio Performance II: An Update," The Financial Analysts Journal, 47, 3 (1991), p. 40-48.*

was thought to help increase an investor's confidence that his or her portfolio remained on track to meet long-term goals.

Risk Assessment by Way of Investment Strategy Questionnaire

Investment advisors needed to determine a client's investment profile and goals and choose the most appropriate investment strategy for the client's particular needs. O'Hagan assessed a client's investment profile and strategy by asking the client to fill out a questionnaire (see Exhibit 5 and Exhibit 6), which aimed to ensure a thorough analysis of a client's needs.

The questionnaire also helped an advisor gain insight into how the client might react to future market conditions. For example, a client whose objective was to grow capital but also admitted to having a hard time dealing with losses presented a paradox to be reconciled by the advisor. An advisor could often best mitigate such challenges by actively managing clients' expectations.

Statement of Investment Priorities and Goals

A client's investment priorities and goals were partially uncovered by the decision-tree questionnaire. They were also driven by a needs analysis, which examined a client's age, gender, current gross income, tax rate, expected retirement age, per cent of current income desired at retirement, life expectancy based on ancestral longevity and exogenous factors such as expected future rates of inflation and taxation. In addition, a needs analysis evaluated a client's investment horizon, short-term needs and long-term planning. The outcome of the analysis was to develop a Statement of Investment Priorities and Goals (also known as an Investment Policy Statement) that documented the key financial goals that the client was trying to achieve (e.g. a certain level of expected return with a particular amount of risk, as well as inflation protection) subject to a number of constraints including liquidity needs, investment horizon, tax consideration and any unusual circumstances.

THE GLOBAL FINANCIAL CRISIS[3]

The fundamental cause of the global financial crisis was the collapse of the U.S housing market, which began in 2006 (see Exhibit 7) after huge price increases that coincided with lower mortgage rates. The collapse in housing was triggered by the subprime mortgage business, in which U.S. banks gave high-risk loans to customers with poor credit histories. These and other loans or forms of credit were bundled into portfolios — or collateralized debt obligations (CDOs) — and sold to investors globally. U.S. mortgage rates rose sharply between 2004 and 2006 (with the prime rate more than doubling from four per cent to over eight per cent), causing high numbers of homeowners to default on their mortgages and housing prices to plummet. Credit markets froze in 2007 as banks were reluctant to lend to each other.

On March 17, 2008, the near collapse of investment bank Bear Stearns (acquired at a fire-sale price by JPMorgan Chase with intervention from the Federal Reserve) created a crisis of confidence within the financial sector. On September 7, 2008, the U.S. government rescued Fannie Mae and Freddie Mac (the government-sponsored enterprises that were originally created to provide mortgages to low-income families), which accounted for nearly half of the outstanding U.S. mortgages. One week later on September

[3] *Much of the discussion in this section is based on a BBC Business News report: "Timeline: Credit Crunch to Downturn," http://news.bbc.co.uk/2/hi/7521250.stm (accessed December 21, 2009).*

15, 2008, investment bank Lehman Brothers, in business since 1850, filed for bankruptcy protection while another major investment bank, Merrill Lynch, negotiated its own emergency sale to Bank of America. The following day, the U.S. Federal Reserve took an US$85 billion stake in AIG, the country's biggest insurance company, to save it from bankruptcy.

On March 2, 2009, Canada's gross domestic product (GDP) was reported to have contracted 3.4 per cent in the fourth quarter of 2008, causing the S&P/TSX to plunge.[4] Canadian investors grew anxious as commodity prices in general and the oil price in particular were declining rapidly (see Exhibit 8 and Exhibit 9). For its part, the U.S. economy declined a woeful 6.4 per cent in the fourth quarter of 2008. Gold prices surged as it was viewed as a safe haven investment during troubled times (see Exhibit 10). Indeed, during the first week of March 2009, many investors feared that despite governments around the world spending trillions of dollars to stabilize the global economic and financial system, a gathering second "Great Depression" could in short order strike the world.

RUDY WONG'S CLIENTS

On March 6, 2009, Rudy Wong reviewed the files of four of his clients to prepare for his upcoming meetings with them (see Exhibit 11).

Bob Miller

Bob Miller indicated in his investor profile questionnaire that he would not change strategy simply due to short-term losses. Miller had insisted on allocating a sizable portion of his portfolio to Canadian oil and gas stocks, despite Wong warning him on multiple occasions that these stocks were subject to great cyclical volatility. Wong believed that the cyclical nature of these investments meant that Miller should remain patiently invested notwithstanding the current downturn as the global economy's inevitable recovery should lead to a surge in oil and gas stocks and the equity markets more generally.

Wong worried that the financial crisis was exerting a profound emotional toll on Miller, who had complained of watching business news channels on television and being consumed with fear as a result of the steady stream of pessimistic forecasts by commentators. Miller told Wong in their phone conversation on March 6, 2009, that he feared financial Armageddon might be at hand. Wong hoped Miller would respond favourably to calm reassurance, but was concerned that rational analytical discussions would not calm Miller and, as a result, Miller's fear would cause him to pull his money out of equities entirely. Wong viewed such a potential action as a form of "illusion of control," whereby a client mistakenly believed they could make their own trades to better alter the outcome of their portfolio returns; however, clients often underestimated the downside risk of doing so.

Wong also thought Miller was a good example of someone who experienced swings in his emotions that were often reflected in overall market sentiment (see Exhibit 12). An emerging branch of academic research, known as behavioral finance, relied on such cognitive and emotional factors to attempt to explain investment decisions that did not appear to be fully rational. The premise was that many individuals were poorly equipped to make sound investment decisions because they were prone to many biases, relied on simple yet misplaced heuristics or rules-of-thumb and made decisions that were influenced by the manner

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[4] "Canada's Recession Deepened in Q4 of 2008," CTV News Online, March 2, 2009, http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20090302/gdp_drops_090302?hub=MSNHome (accessed December 21, 2009).

in which they were framed. Biases included excessive optimism, overconfidence, confirmation bias (ignoring information counter to one's current viewpoint) and illusion of control (discussed above). The representative heuristic involved making poor judgments based on stereotypical thinking. For example, assuming that a company with a relatively weak-looking balance sheet was necessarily a poor investment. Other heuristics included anchoring (starting with an initial judgment and only moving slowly away from it) and relying on gut feel. Framing effects included the notion of loss aversion whereby typical investors weighted a looming loss more than twice as acutely as a similarly-sized gain, which could cause investors to act too conservatively. Wong needed to help Miller overcome these decision-making pitfalls in order to best achieve his long-term goals.

Mary Swanson

Mary Swanson was generally a non-emotional decision-maker. She spent much of her life as an academic and Wong thought it would be possible to persuade Swanson to make small tactical adjustments to her portfolio while maintaining the overall asset allocation and growth strategy. At the same time, Wong understood that Swanson was deeply concerned. For Swanson to continue to follow her long-term investment strategy, Wong would have to make well-reasoned arguments.

Wong considered several options for Swanson's portfolio. On the fixed-income side, Wong thought about shifting funds from government to corporate bonds which seemed to provide a more compelling risk-adjusted return outlook, given how corporate bonds had recently suffered tremendous losses as yield spreads over government bonds had widened to unprecedented levels (see Exhibit 13). The continuing effects of the financial and economic crisis, however, meant that corporate bond default risk might be too extreme for Swanson to bear. Wong was hesitant to transfer funds from equities to cash as the capital gains that Swanson's equity position had accumulated over time had been eroded during the stock market drop. Wong believed that stocks would rebound and Swanson would then be forced to buy in at a much higher price if she were to switch back from cash to equities. Perhaps Swanson might alternatively be interested in taking a slightly bigger position in gold. Wong considered this option, but wondered whether now was the time for such a move.

Jack and Kelly Klein

The Klein's large exposure to equities made them very nervous when stock prices started to drop sharply. Generally, they both had calm temperaments that were well-suited to long-term investment. Wong thought he had a good chance of persuading the Kleins to maintain their current asset mix if he could show them that a market low might provide them an opportunity to invest more money in equities, lowering their overall investment cost base and potentially realizing further gains in the future. He wanted to reiterate that, historically, equities were the only asset class capable of the rates of return that would enable the couple to realize sufficient growth for retirement savings. On the other hand, Wong recognized that this could be a tough sell as the Kleins might interpret the term "buying opportunity" to be one used by a self-interested advisor simply seeking to gather more assets under management.

Herb and Barb Nichols

Dividend funds tended to be less volatile, so the Nichols were less likely to want to change their investment strategy than if their investments had been predominantly in growth-oriented equities;

nonetheless, the Nichols had a bias toward thinking in terms of trends. When the stock market continued to fall, the Nichols feared the trend would mean stocks could fall to zero. Wong knew he had to persuade the Nichols to get past this bias. One way might be to show them the rolling 10-year average returns for equities since 1900. The market had gone on to achieve higher levels of valuation following each and every previous recession and stock market downturn. Catastrophic historical events in the past half-century such as the Cuban Missile Crisis (1962), the global market crash in October 1987, the Asian currency crisis (1998) and the World Trade Center bombing and attacks (1993 and 2001) all led to significant market sell-offs, but markets subsequently recovered to higher levels. Wong's view was that this time would be no different. That said, he wondered whether there was a more effective way to persuade the Nichols to move beyond their bias.

NEXT STEPS

Wong expected each of the four clients to respond differently to different appeals. Some would be persuaded by logic while others would require emotional counseling and behavioral modification. Wong also needed to consider tactical and strategic decisions with respect to each client's individual portfolio. He wanted to remain faithful to his previously articulated long-term strategies, but part of Wong was concerned that staying the course would be inappropriate if the current global financial crisis did not lead to a rebound, as in previous incidents of market turmoil. Could he rely on the past to predict the future in this instance? Wong also recalled conversations with members of the firm's Compliance Department that indicated the courts had come down hard on advisors who did not demonstrate a clear assessment of the risk profiles and suitability of investments for clients. Whatever advice Wong delivered needed to balance his personal opinion with an assessment of the risk inherent in the strategies that he was contemplating.

Exhibit 1

THE DOW JONES INDUSTRIAL AVERAGE FROM JANUARY 2, 2001 TO MARCH 6, 2009

Source: Bloomberg.

Exhibit 2

STANDARD & POOR'S / TORONTO STOCK EXCHANGE INDEX
FROM JANUARY 2, 2001 TO MARCH 6, 2009

Source: Bloomberg.

Exhibit 3

HISTORICAL ASSET RETURNS AND RISK FROM 1924 TO 2008

		Canadian stocks	U.S. stocks (Cdn$)	Canadian govt bonds	Canadian T-bills	Cnd CPI
85 yrs	**Return**	**9.7%**		**6.2%**		**3%**
	St. Dev	*18.8*		*8.7*		*4.1*
50 yrs	**Return**	**9.2%**	**9.7%**	**7.9%**	**6.8%**	**4.1%**
	St. Dev	*16.4*	*17.3*	*10.1*	*3.9*	*3.2*
15 yrs	**Return**	**7.1%**	**5.9%**	**8.2%**	**4.1%**	**1.9%**
	St. Dev	*17.9*	*20.3*	*9.3*	*1.4*	*1.0*
5 yrs	**Return**	**4.2%**	**-3.6%**	**7.6%**	**3.3%**	**1.9%**
	St. Dev	*22.7%*	*13.7*	*4.5*	*0.8*	*0.5*

Note: "Return" is the average annual compound return, "St. Dev" is the standard deviation of returns, "Canadian stocks" is the return (including dividends) on the Canadian stock market, "U.S. Stocks (Cdn$)" is the return on the U.S. stock market (including dividends) converted to Canadian dollars, "Canadian govt bonds" is the return on long-term Government of Canada bonds, "Canadian T-bills" is the return on Canadian treasury-bill investments and "Cdn CPI" is the year-over-year change in the Canadian consumer price index.

Source: "Report on Canadian Economic Statistics 1924-2005," Canadian Institute of Actuaries, March 2006 (updated through December 2008 by Stephen Foerster).

Additional Note on Return and Risk

Over the long run, investment in equities has been the best way to grow capital, albeit at relatively higher volatility. Bonds are typically used to smooth portfolio returns, providing a consistent source of income and keeping overall portfolio volatility in check. Cash has no growth potential after taxes and real returns are minimal; however, it does provide liquidity to meet cash outlays planned in the near future, including a provision for emergencies. It also tempers downside risk during times of uncertainty and can provide a source to deposit money until better investment opportunities become available.

Source: O'Hagan Securities.

Exhibit 4

DIVERSIFICATION BENEFITS

Not all investments move in the same direction, at the same time and to the same degree. While the return of a portfolio is the weighted average of returns from its holdings, the volatility is not. Volatility (as measured by standard deviation) of a portfolio is a function of the volatility of each holding and the correlation between these investments. Accordingly, combining any two securities that are less than perfectly correlated will lead to a lower volatility than the weighted average of each security's volatility.

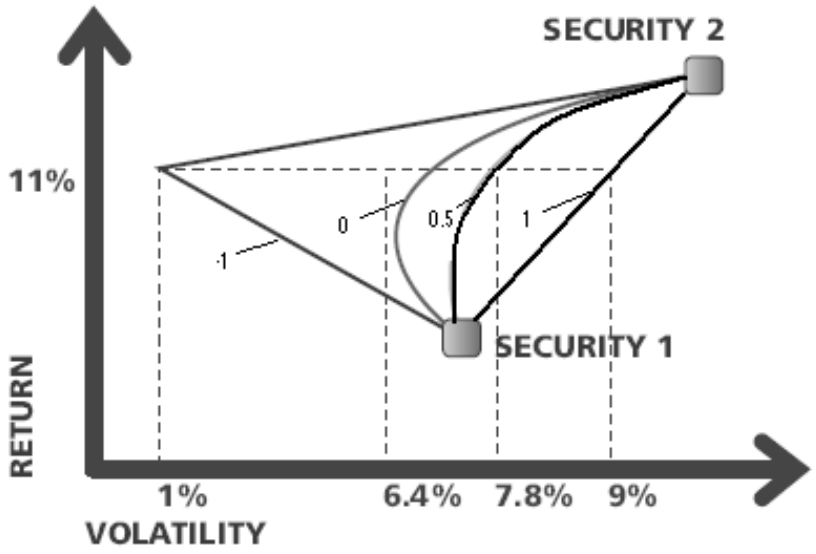
Standard deviation is the most commonly used measure of risk of a security or portfolio. It measures the probability of distribution of returns around its mean. For example, a security with an expected return of 10% and standard deviation of 8% has a 66% probability that its actual return will be within the range of 10% +/- 8% (one standard deviation), a 95% probability that its return will be within the range of 10% +/- 16% (two standard deviations), and a 99% probability that its returns will be 10% +/- 24% (three standard deviations).

Correlation refers to whether or not two investments will move at the same time for the same reason and in the same direction. If they move in perfect harmony, they would have a correlation coefficient of +1. If they move exactly in the opposite direction, they will have a correlation coefficient of -1. If there is no relationship between the returns of the two securities, their correlation will be zero.

Investors are risk averse. This means that, all other things being equal, they prefer to minimize volatility in their portfolios. However, limiting the volatility to low risk securities means historically lower rates of return. In order to increase the likelihood of achieving a higher return, investors need to include some higher risk securities, but they need to combine them in a way that some of their fluctuations can cancel out, therefore mitigating risk.

Diversification reduces a portfolio's volatility more efficiently than most investors would expect. The return from a portfolio of two securities is equal to the sum of the weighted returns from each of the individual securities. However, unless the correlation between the two securities is +1, the standard deviation of the portfolio will be less than the weighted sum of the standard deviation of each security.

Exhibit 4 (continued)



Correlations from left to right: -1, 0, 0.5, 1

Example

Security 1:	Security 2:
Expected return: 10%	Expected Return: 12%
Standard deviation: 8%	Standard Deviation: 10%

Correlation between these two securities is 0.5.

Portfolio of 50% security 1 and 50% security 2:
Expected return: 11% (50% of 12% and 50% of 10%)

The standard deviation of a portfolio of two securities is calculated as follows:
$(W_1^2\sigma_1^2 + W_2^2\sigma_2^2 + 2W_1W_2\,\text{Correlation}_{1,2}\,\sigma_1\,\sigma_2)^{1/2}$

Where W_1 and W_2 are the weights of the securities, σ_1 and σ_2 are their standard deviations, and $\text{Correlation}_{1,2}$ is their correlation.

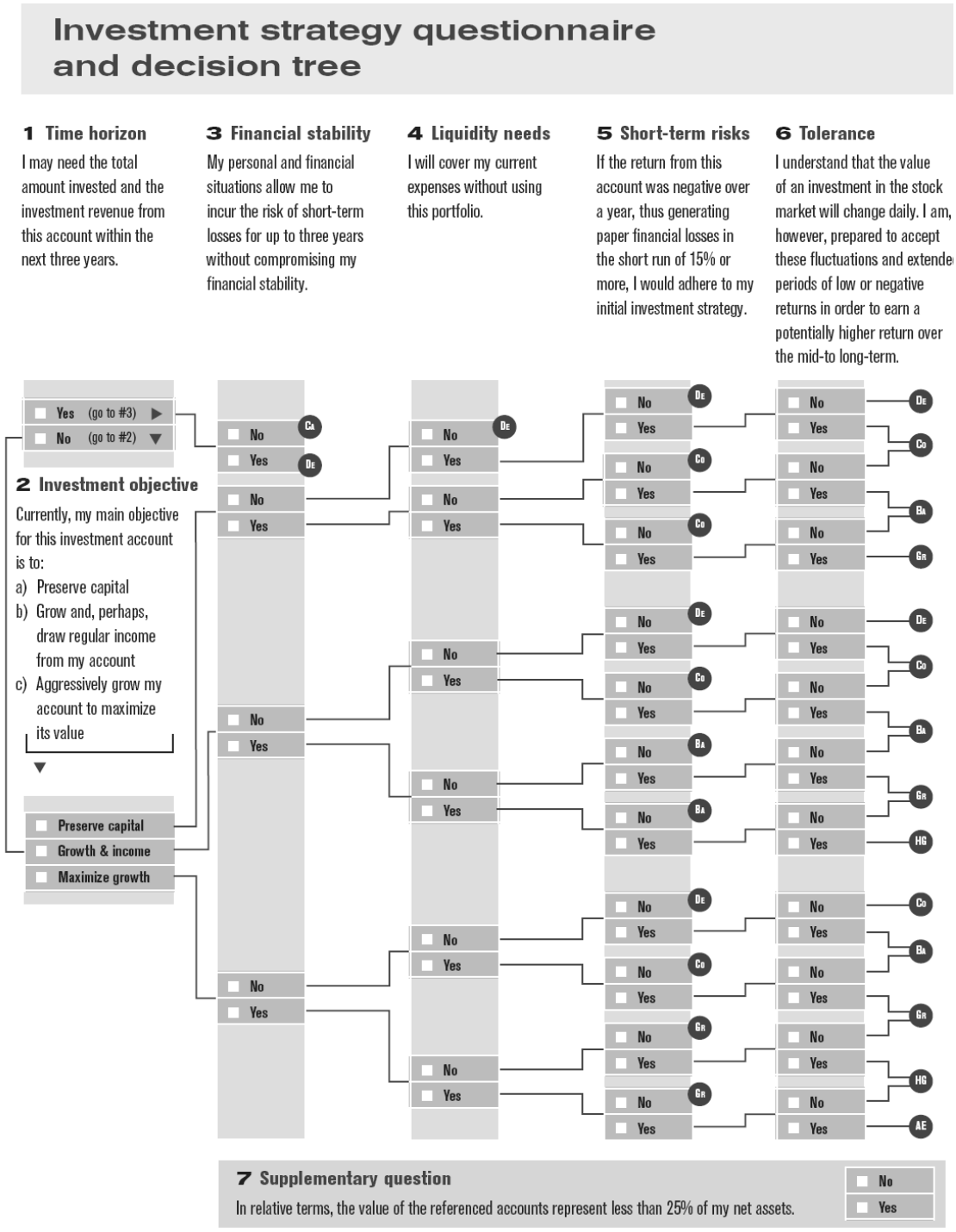
Plugging in the numbers will yield the following:
$(0.5^2 \times 0.08^2 + 0.5^2 \times 0.1^2 + 2 \times 0.5 \times 0.5 \times 0.5 \times 0.08 \times 0.1)^{1/2} = .078 = 7.8\%$

Based on this formula, the highest volatility would result in case the two securities had a +1 correlation. In that case the volatility of the portfolio would have been 9%, or the weighted average of the volatility of each security.

Source: O'Hagan Securities.

Exhibit 5

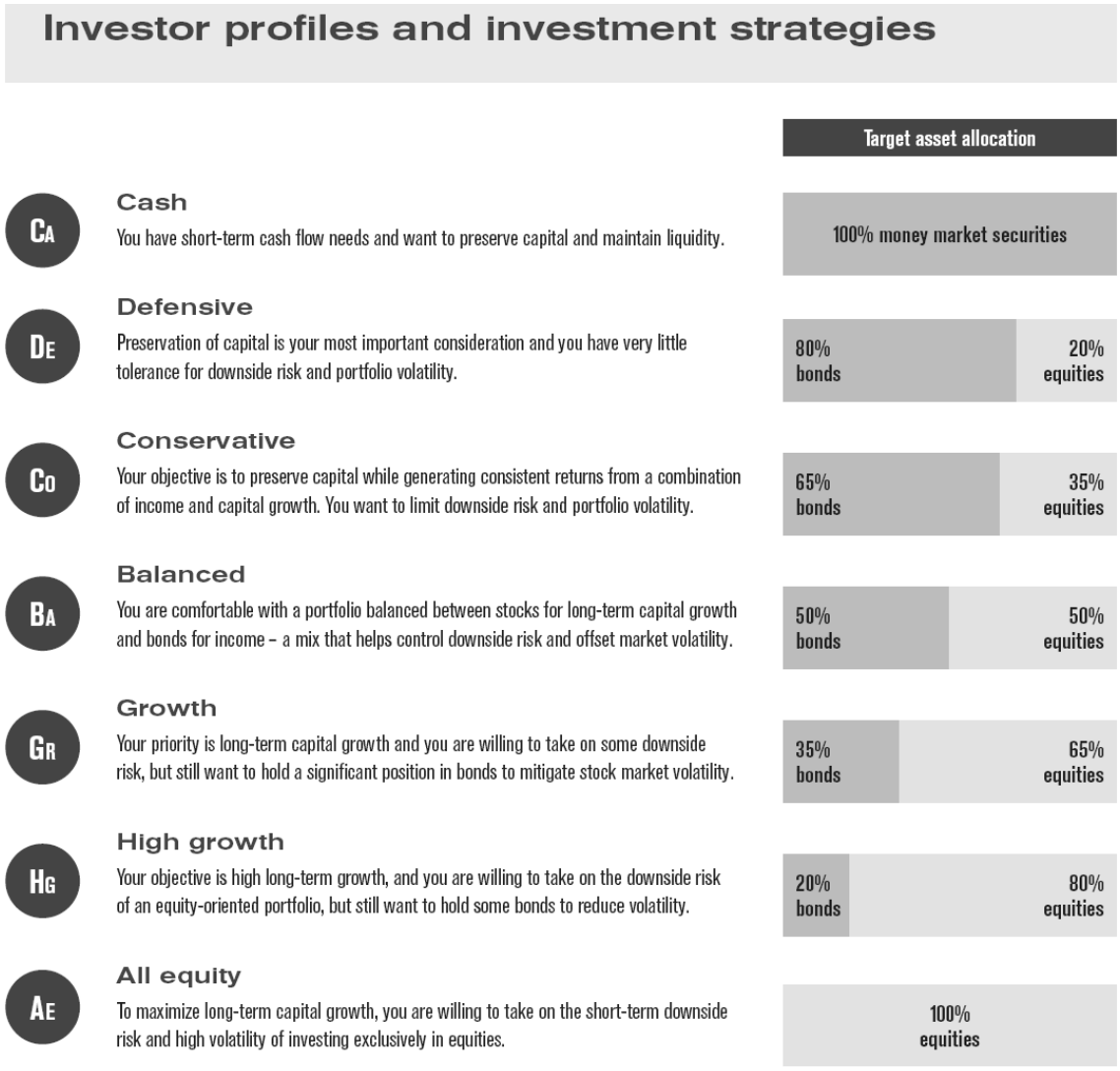
INVESTMENT STRATEGY QUESTIONNAIRE



Source: O'Hagan Securities.

Exhibit 6

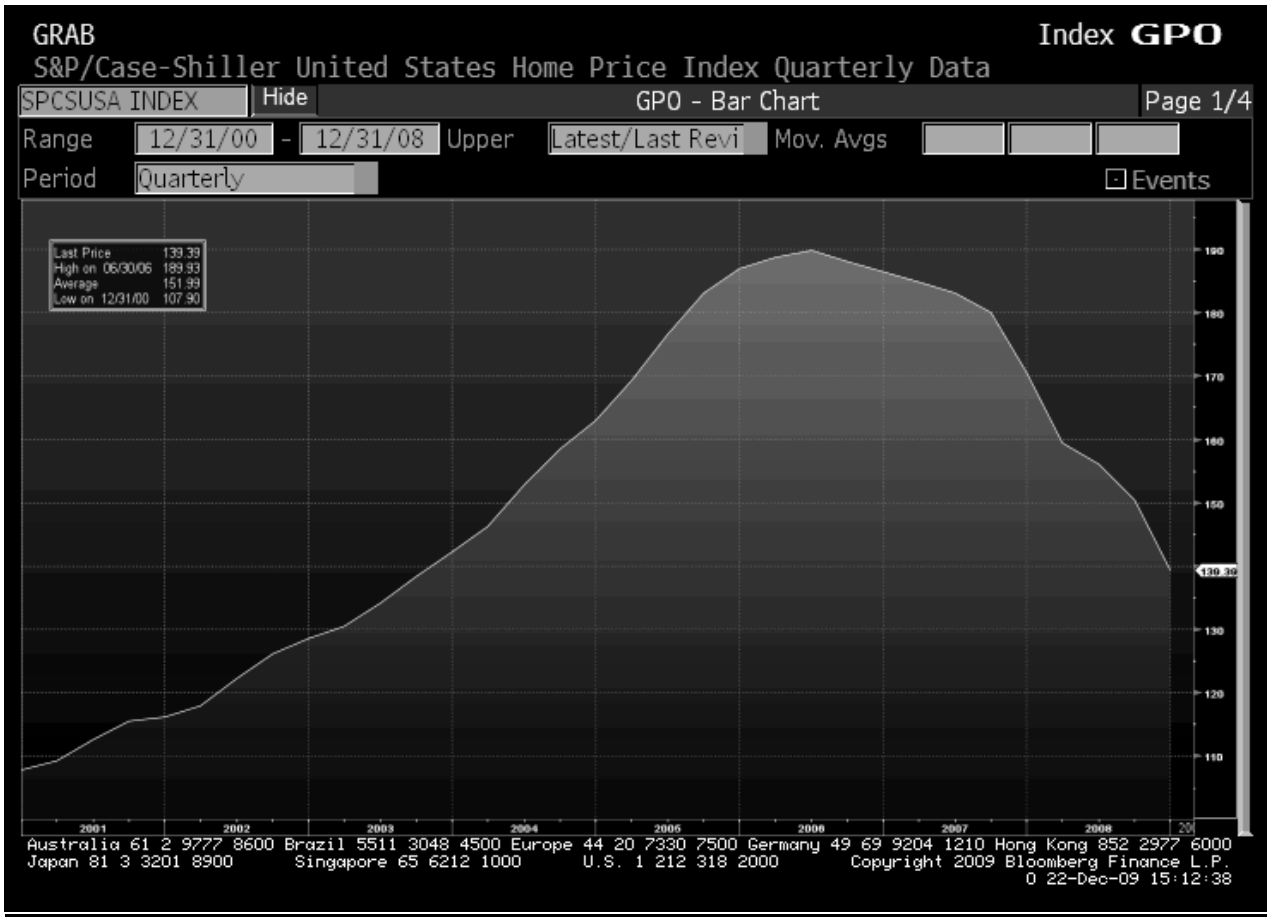
INVESTMENT PROFILES RESULTING FROM INVESTMENT STRATEGY QUESTIONNAIRE



Source: O'Hagan Securities.

Exhibit 7

STANDARD & POOR'S / CASE-SHILLER HOME PRICE INDEX:
QUARTERLY DATA FROM DECEMBER 31, 2000 TO DECEMBER 31, 2008



Source: Bloomberg.

The S&P/Case-Shiller Home Price Indix measures the residential housing market, tracking changes in the value of the residential real estate market in 20 metropolitan regions across the United States.

Source: Standard & Poor's http://www.standardandpoors.com/indices/sp-case-shiller-home-price-indices/en/us/?indexId=spusa-cashpidff--p-us---- (accessed January 6, 2010).

Exhibit 8

STANDARD & POOR'S GOLDMAN SACHS COMMODITY INDEX
FROM MAY 1, 2007 TO MARCH 6, 2009

Source: Bloomberg.

Exhibit 9

SPOT PRICE (US$) INDEX OF WEST TEXAS INTERMEDIATE CRUDE OIL AS TRADED ON THE NEW YORK MERCANTILE EXCHANGE FOR DELIVERY AT CUSHING, OKLAHOMA FROM MAY 1, 2007 TO MARCH 6, 2009

Source: Bloomberg.

Exhibit 10

PRICE OF GOLD (US$ PER TROY OUNCE) FROM MAY 1, 2007 TO MARCH 6, 2009

Source: Bloomberg.

Exhibit 11

CLIENT PROFILES

Bob Miller

Bob Miller was a single, 42-year-old man whose annual salary teaching elementary school was $50,000. Miller had recently invested 70 per cent of his portfolio in equities. He had high exposure to the Canadian oil and gas sector, including Suncor which fell from a high of $72 on May 20, 2008 to $27 on March 6, 2009. Miller indicated in his decision-tree that he was capable of withstanding big losses in one year and would remain faithful to his long-term investment strategy. Because he did not have dependents, Miller had no need for significant short-term liquidity. Miller's investment horizon was 23 years, as he wanted to achieve sufficient growth to retire comfortably at age 65.

Mary Swanson

Mary Swanson was a retired professor from the University of British Columbia (UBC) who in 2008 transferred her UBC pension to O'Hagan Securities. Swanson's portfolio had been composed of 60 per cent equities and 40 per cent bonds and was valued at greater than $1 million. This reflected a fairly conservative asset mix due to Swanson's investment horizon of 30 years and need for growth. On the equities side, the portfolio consisted of a mix of large, medium and small-cap stocks. On the fixed income side, it was made up of corporate bonds and Guaranteed Investment Certificates (GICs). For inflation hedging purposes, five per cent of funds were allocated to gold and an additional five per cent were allocated to real estate in Canada, which had not been significantly affected by the crisis in the United States. Swanson had no short-term liquidity needs. The recent global financial crisis made her very concerned, but not emotionally overwhelmed. The media-driven panic had nonetheless made Swanson fear a loss of capital and led her to consider shifting a large proportion of her money to cash.

Jack and Kelly Klein

The Kleins had been investing regularly but did not have a lot of assets. Their investment objective was to save for retirement, which was 30 years away. They needed to achieve high growth for their retirement fund; as such, they invested 85 per cent in equities and 15 per cent in bonds. High exposure to equities meant their portfolio's value dropped more than 50 per cent since July 2008.

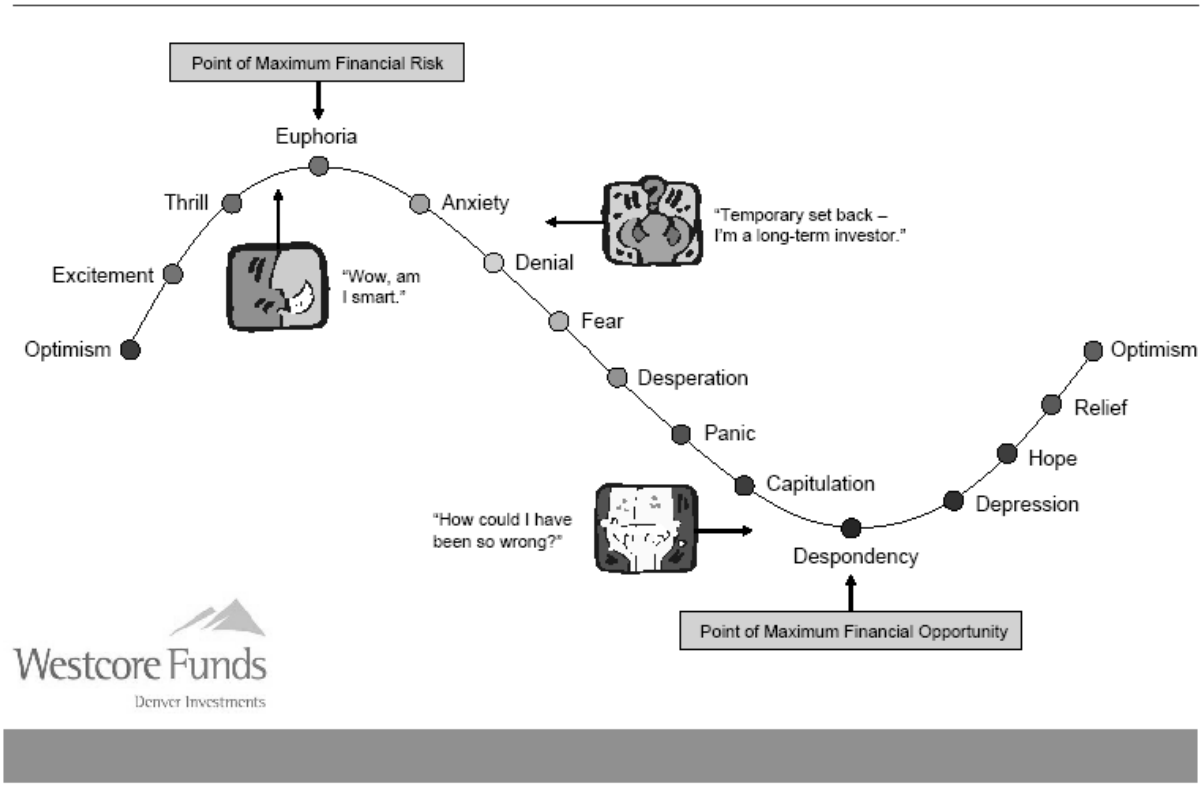
Herb and Barb Nichols

The Nichols were married, were both 50-years-old and had just inherited $100,000. They knew the market had been extremely volatile and were not sure how to invest their funds. They had some short-term liquidity needs, but had solid incomes so they did not need to allocate funds in cash. They wanted to grow their money and had a fairly high risk tolerance, so Wong had suggested they allocate 75 per cent in equities and 25 per cent in bonds. It would be 10 years until they needed the money, and taxation was an issue. To lessen the Nichols' tax burden, Wong had invested their cash in dividend funds, as Canadian-sourced dividends were taxed at relatively low rates.

Source: O'Hagan Securities.

Exhibit 12

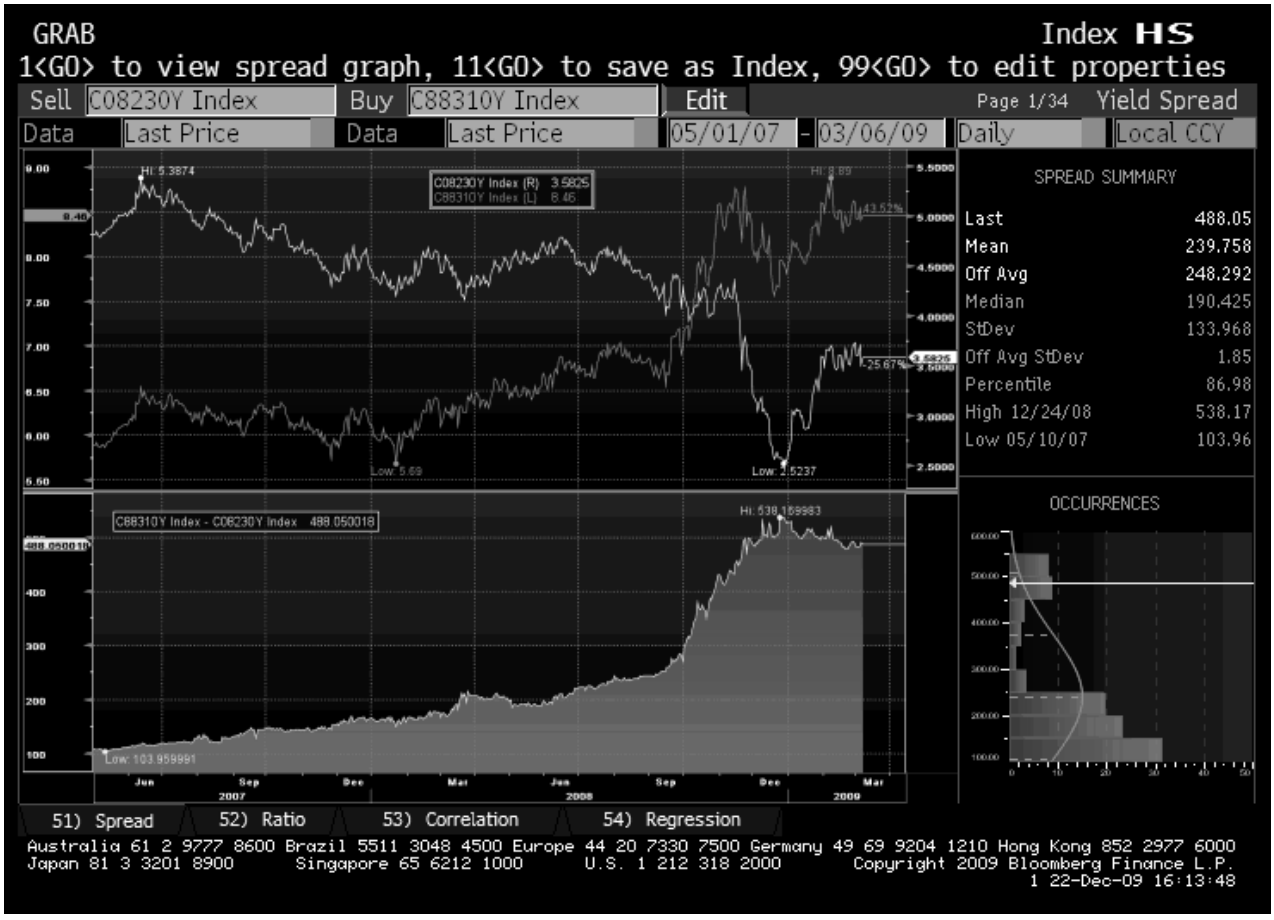
THE CYCLE OF MARKET EMOTIONS



Source: Westcore Funds Denver Investment, 1998. Used with permission.

Exhibit 13

10-YEAR BBB BONDS VERSUS LONG-TERM U.S. GOVERNMENT BONDS FROM MAY 1, 2007 TO MARCH 6, 2009



C08230Y Index is a 30-year U.S. Government Bond Index and is calibrated on the right-hand scale of the top graph. It represents the U.S. Treasury fair market index derived from Bloomberg's fair market curves. C088310Y Index is a BBB-rated US$ 10 year domestic composite curve and is calibrated on the left-hand scale of the top graph.

Source: Bloomberg.

The spread between the two curves reflected the premium investors had demanded to assume the greater risk associated with BBB bonds relative to long-term U.S. government bonds. The bottom graph shows this spread between May 1, 2007 and March 6, 2009. On March 6, 2009, the spread was 488 basis points, a wide spread relative to the period mean of approximately 240 basis points and the initial period spread of around 100 basis points.

Source: Case writer