Investing successfully in volatile markets

A presentation of

Use of indexes in this presentation

- This presentation uses a number of indexes defined on the following page to explain and illustrate investment concepts. Indexes are very useful in providing a means for individuals to verify the accuracy of statements made in this and other presentations. But their limitations need to be understood.
- Index returns are for illustrative purposes only and do not represent actual performance of an account. Past performance does not guarantee future results. You cannot invest directly in an index. Index performance returns do not reflect any management fees, transaction costs or expenses, the incurrence of which would have the effect of decreasing indicated historical performance results.

Common indexes defined

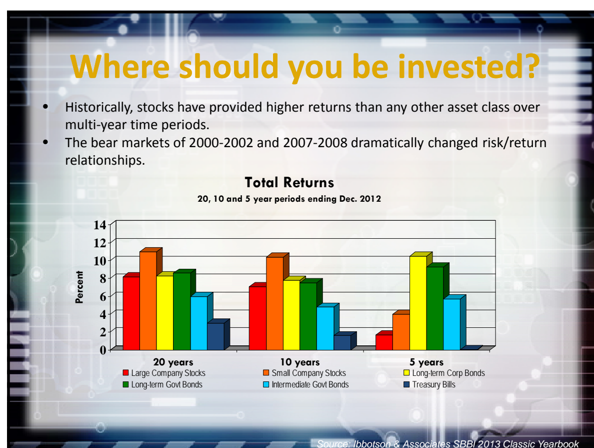
- **S&P 500 Index** - The aggregate market value of all shares of common stocks of 500 stocks from 83 industrial groups.
- **NASDAQ Composite** - A measure of the aggregate performance of all NASDAQ National Market System stocks, except warrants, and all other NASDAQ domestic common stocks.
- **Small Co. Index** – Performance of the Dimensional Fund Advisors Small Company Fund 1970-1978, Russell 2000 index thereafter.
- **International Stocks** – Morgan Stanley Capital Markets EAFE (Europe, Australia, Far East) index.
- **Russell 2000 Index** - Capitalization-weighted index of domestic equities traded on the NYSE, AMEX and NASDAQ. The index represents the bottom 2000 from a universe of the 3000 largest stocks in the U.S.
- **MSCI-EAFE** - Morgan Stanley's Europe/Australasia/Far East Index.
- **Long-Term Corporate Bonds** – Salomon Brothers Long-Term High Grade Corporate Bond Index- Corporate securities promising specific payments of interest and/or principal financed by a first claim on the issuer's earnings or assets. .
- **Intermediate-Term Treasury Bonds** - U.S. government bonds paying interest on money borrowed over a specific period of time.
- **Treasury Bills** - Short-term U.S. government bonds paying interest on money borrowed over a specific period of time.
- **Emerging Markets** - Morgan Stanley Capital International Index.

Investment cautions

- Past performance may not be indicative of future performance. No current or prospective investor should assume that future performance results will be profitable or equal the past performance.
- We believe that the information contained herein to be accurate, but we cannot guarantee the accuracy of such information. Different types of investments involve varying degrees of risk, and there can be no assurance that any specific investment will be profitable.
- This document is not a substitution for personalized investment advice. Investors should consult with a financial advisor before investing.

Where should you be invested?

- Historically, stocks have provided higher returns than any other asset class over multi-year time periods.
- The bear markets of 2000-2002 and 2007-2008 dramatically changed risk/return relationships.



Source: Ibbotson & Associates SBBI 2013 Classic Yearbook

Advantages of investing in stocks

- Liquidity
- Minimal carrying costs
- No storage or maintenance requirements
- Capacity to fit small or large portfolios
- Ability to easily diversify portfolios
- Ability to hedge or short positions
- Variety of investment objectives from income producing to aggressive growth
- Historical track record

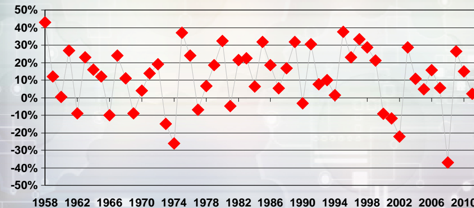
Disadvantages of stocks

- **Equity markets are very inefficient sources of growth.**
- The odds of achieving a 10% average annual return are much greater if you have 50 years to invest than 15 years, and even then there are no guarantees.
- Buy-and-hold investors have spent 2/3s of time invested in bear markets or recovering from down markets.
- Annual total return for the S&P 500 index over the last half century has ranged from a high of 43% in 1958 to a low of -37% in 2008, shown in the following scattergram.
- The S&P 500 index gained less than1% annually including dividends for the 10 years ended Dec. 31, 2009.
- From 2002-2011 total annual return was 2.9%.

Source: Ibbotson & Associates 2012 Classic Yearbook and Yahoo Finance

Equity markets are more volatile than many investors realize

S&P 500 Index Annual Total Return
1958-2012

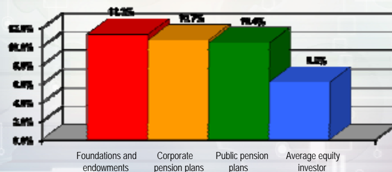


Source: Ibbotson SBBI Classic Yearbook 2013

More problems with equities

- Individual investors on average fail to achieve market returns even in good markets.

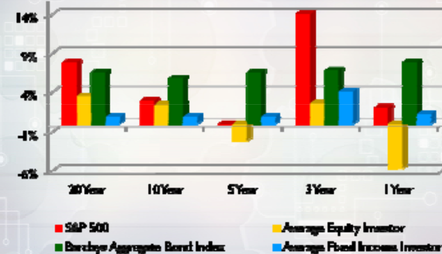
Return Variations Between Institutional and Individual Investors



Source: Mercer Investment Consulting

Dalbar QAIB study confirms results

Annualized Investor Returns vs. Benchmark



Source: Quantitative Analysis of Investor Behavior Study, 2012 Update, Dalbar Inc.

Why do individuals lag market results?

Individual investors tend to buy late in a rising market and hold on only to sell at the market's bottom when the pain becomes too great, because they:

- Underestimate market volatility.
- Fail to use investment approaches that manage risk effectively.
- Allow emotions to dominate investment decisions.

Distribution of Returns

S&P 500 Total Annual Return*
1926 - 2012

Range	85-Year Frequency
Losses greater than -30%	4%
Losses greater than -10%	9%
Losses from 0 to -10%	18%
Gains from 0 to 10%	21%
Gains greater than 10%	52%

*Includes dividends and reinvestment return

Source: Ibbotson 2008 - 2013 SBBI Yearbooks

Volatility is the norm

"The stock market is much more volatile than most investors realize. One measure of volatility is the range of annual moves in the market from year-end to subsequent year-end. The market moves dramatically both positively and negatively to ultimately produce its modest long-term average return."

Edward Easterling
Crestmont Research

Source: Unexpected Returns: Understanding Secular Stocks Market Cycles, Edward Easterling.

Intra-year volatility

S&P 500 Total Return*
1926 - 2012

Years with Cumulative Month-to-Month …	85-Year Frequency
Losses greater than -20%	14%
Losses greater than -10%	29%

*Includes dividends and reinvestment return

Data source: Ibbotson 2013 SBBI Classic Yearbook

Mathematics of gains and losses

- It's harder to make up losses than most investors realize.
- Historically the market has spent 2/3s of its time either in a declining market or making up losses.

If the DECLINE is	It takes the following GAIN to break even
-25%	+33%
-33%	+50%
-50%	+100%
-75%	+300%
-90%	+900%

"Investing is simple, but not easy."

Warren Buffett
- interview on CNBC

Traditional Tools to Reduce Risk

Traditional risk management

Based on the belief that markets are either

1) Random or
2) Efficient

and either

1) Impossible to predict or
2) Too efficient to outsmart.

Traditional approaches

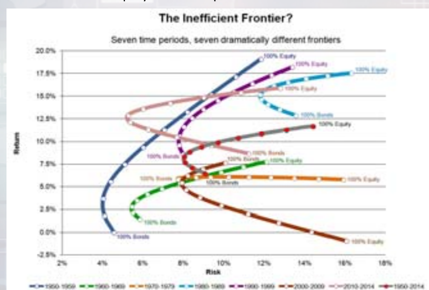
- **Diversify** the portfolio with non-correlated asset classes that have historically moved in different cycles.
- **Rebalance** periodically to maintain your desired asset allocation.
- **Dollar cost average** by continually adding to your asset classes in both rising and declining markets.
- Other than rebalancing, **hold** your portfolio for the long term regardless of market conditions.

The Efficient Frontier can shift

- Diversification tends to rely on the Efficient Frontier theory to determine appropriate bond/equity mixes.
- The Efficient Frontier uses correlation coefficients to quantify which assets tend to move up or down with or against other assets.
- Correlation coefficients change over time.
- In down markets, correlations go up as all asset groups tend to get caught up in the same panic selling, negating the value of diversification.
- Studies by Rydex Investments shows dramatic shifts in the Efficient Frontier from decade to decade.

The Shifting Frontier – 1950-2014

Efficient Frontier of equity and bond portfolios illustrated in 10% increments



Equity returns are based on the S&P 500 index, including the reinvestment of dividends and adjusted for inflation. Bond returns *are based on* Barclays Capital Aggregate Bond Index allocated in 10% portfolio increments using mean/average standard deviations and returns over the decades and 65-year period from 1950 to 2014. The circle indicates the point at which the portfolio is invested in 60% equity, 40% bonds. *Initial chart developed by Rydex Investments. Updated by Flexible Plan Investments LLC in 2015.*

Sell your winners, buy the losers

- Rebalancing is the opposite of the Wall Street wisdom of "Sell your losers short and let your winners run."
- Because asset classes tend to move in cycles, it can be decades before a losing position rebounds.

Market Opportunities Change Over Time

DECADE	50s	60s	70s	80s	90s	00s*
WINNERS	S&P 500	Small-Cap	Small Cap	International	Nasdaq	Oil & Gas
RETURNS	19%	16%	11%	23%	25%	114%
LOSERS	LT Government Bonds	LT Government Bonds	High Yield	Small-Cap Growth	Real Estate	Large-Cap Growth
RETURNS	0%	1%	5%	12%	4%	-2%

Source: Ibbotson 2012 SBBI Classic Yearbook; 2000 – 2009 XOI data

Buying into a declining market

- Dollar cost averaging is psychologically one of the most difficult investment approaches.
- Few people can continue to buying in a declining market where every purchase results in a loss of assets.
- From childhood we are told not to "Throw good money after bad."

Bear market realities

- Bear markets occur on average once every five years.
- Between 1929 and 2012 there were 19 bear markets.
- The average bear slashed portfolios by 30%.
- It took an average of 3.5 years to return to breakeven.

Buy-and-hold investors spend 2/3s of the time they are invested in the market losing money in down markets and returning to break even.

Buy-and-hold increases risk

- The likelihood of financial damage from a bear market increases the longer you are invested.
- We insure against losses in other aspects of our lives from home and auto to personal liability.
- Only in financial investments are individuals told there is nothing they can do to prevent losses other than diversification, which has its own costs.

Turning Volatility to an Advantage

Active management strategies

1. Use active allocation to position a portfolio in the strongest investment classes at the moment, rather than basing investment decisions on historical performance.

Active management strategies

Use active allocation to position a portfolio in the strongest investment classes at the moment, rather than basing investment decisions on historical performance.

2. Apply quantitative analysis to avoid the majority of the market's declines and participate in the majority of the up movements.

Active management strategies

Use active allocation to position a portfolio in the strongest investment classes at the moment, rather than basing investment decisions on historical performance.

2. Apply quantitative analysis to avoid the majority of the market's declines and participate in the majority of the up movements.

3. Invest in leading investment styles or sectors of the financial markets during both up and down markets.

A few words of caution

- *No active management system is perfect. Every investment approach has the potential to lose money rather than making a profit.*
- *Even good systems will make investments that do not meet performance expectations and may lose money.*
- *Investment approaches often perform very differently at different stages of a full market cycle.*
- *A successful investment approach is one where profitable trades outweigh the losers over time.*

Active management strategies

Use active allocation to position a portfolio in the strongest investment classes at the moment, rather than basing investment decisions on historical performance.

2. Apply quantitative analysis to avoid the majority of the market's declines and participate in the majority of the up movements.
3. Invest in leading investment styles or sectors of the financial markets during both up and down markets.
4. Use tools such as hedges, bear market funds and inverse funds to profit during declining markets.

What if you could avoid down markets?

- Arguments against active management tend to focus on the possibility that the investor would miss only the best days of the market.
- Studies show that missing the best doesn't matter if you also miss the worst. In fact, missing both the best and the worst increases return with lower volatility.

Impact on Annual Return of Missing the Market
S&P 500 – 25 Years Ending Dec. 31, 2012– Average Annual Return 7.26%

Missed # of Days	Missed Best Days	Missed Worst Days	Missed Best & Worst
10	3.54%	9.74%	7.03%
20	1.60%	14.63%	7.50%
40	(1.59%)	18.31%	7.76%

Source: Analysis performed by Hepburn Capital Management, LLC

There's room for imperfection

- Perfect "timing" according to Professor H. Nejat Seyhun of the University of Michigan would have turned a $1 investment in a market index composed of a value weighted index of NYSE, AMEX and Nasdaq stocks in January of 1926 into **$690 million** in December 1993.
- In comparison, a $1 buy-and-hold investment in the market index would have totaled **$637.30** after the 67 years.

Perfect timing is impossible.

Source: Stock Market Extremes and Portfolio Performance, a study commissioned by Towneley Capital Management and conducted by professor H. Nejat Seyhun, University of Michigan, 1994.

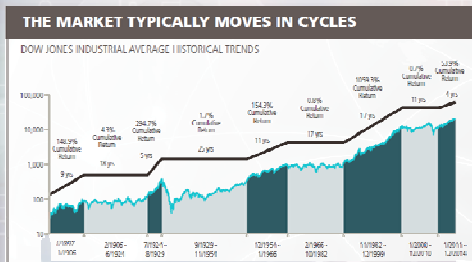
Markets move in cycles

- Although stock markets rise, they do so in fits and starts.
- Great bull and bear markets seem to last approximate roughly 16 to 20 years.
- Following periods of overvaluation, markets can do little exciting for decades, trading sideways as earnings catch up with stock prices.

Past performance should not be considered an indication of future returns.

Dow Jones Industrials

Logarithmic Scale 1929 - 2014



Logarithmic scale allows gains to be viewed in relative percentage gains rather than absolute point gains.

Source: Stockcharts.com, 2005. Updated utilizing data from Yahoo Finance. The DJI is an index and cannot be invested in directly. There can be no guarantee that prior market trends will reoccur. Past performance is no guarantee of future results.

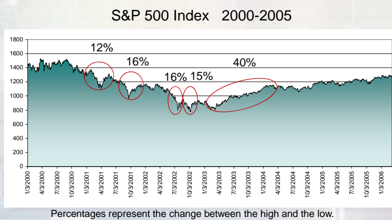
Famous market bubbles

- 1634 -1637 – Tulipomania
- 1711 – 1720 – South Sea Bubble
- 1717-1721 – Mississippi Scheme
- 1840s – Railway Mania
- 1920s – U.S. Roaring Twenties Market
- 1970s – Nifty Fifties
- 1980s – Biotech stocks
- Late 1980s – Japanese stocks
- 1987 – Taiwanese stocks
- Late 1990s – Internet Stocks
- 1990-2000s – Real Estate

Opportunities for profit

- Every market has opportunities for gains.
- Within flat and/or declining markets are significant rallies that offer opportunity if investors can avoid the subsequent drop.

S&P 500 Index 2000-2005



Percentages represent the change between the high and the low.

Data source: Yahoo Finance 3/2006. For illustrative purposes only. No management fees, transaction costs or expenses have been taken into consideration. The S&P 500 Index is unmanaged and unavailable for direct investment. There can be no assurance that any investment strategy could successfully capture brief rallies.

Avoid the bear, ride the bull

- Fundamental forecasting models attempt to project the market's overall direction for the next period.
- Trend following models calculate moving averages and use crossings between prices and moving averages for buy and sell signals.
- Overextended models seek to discriminate between normal and extreme behavior, signaling overbought or oversold situations.
- Sophisticated management systems often use a combination of models.

Some indicators to consider

- Market sentiment – bull / bear indexes
- Investor sentiment
- Options volatility
- 200-day and 50-day moving simple and exponential averages
- Customized moving averages
- New York Stock Exchange bullish percentage
- S&P 500 bullish percentage
- % of stocks moving above/below their 200-day moving average
- % of stocks above/below their 10-week moving average
- Weekly new highs and new lows
- Advance/Decline ratios

Simplified active strategy

- Buy a stock when its 15-day Moving Average crosses **up** the 50-day Moving Average.
  - A positive moving average crossover usually confirms that a stock is on an uptrend.
- Sell when the 15-day Moving Average crosses **down** the 50-day Moving Average.
- Sell everything when the market crosses its moving average down. Wait for the next up crossover for the market as a whole to buy new positions.

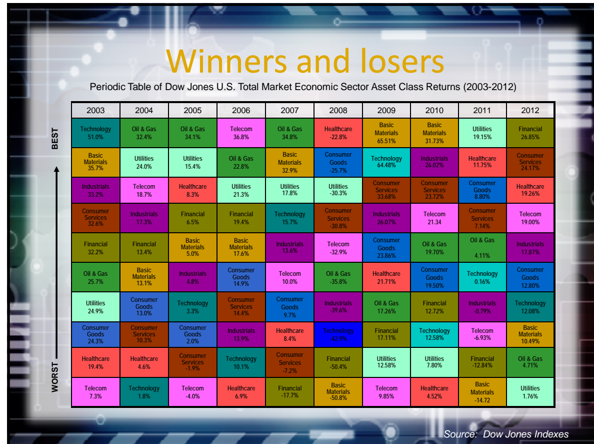
15/50 moving average strategy

All investment strategies have the potential for loss as well as gain.

The sector opportunity

- A sector is a subset of the overall market that shares specific characteristics.
- Sectors can apply to industry, size, geographic region, investment style, dividend yield or a combination of characteristics.
- Nine of the top ten performing mutual funds each year are virtually always sector funds.[1]
- Sector funds have higher volatility, higher portfolio turnover and potentially higher returns and **losses** than a diversified stock fund.
- What is in favor one month, year or five years can quickly fall to the worst performing category.

[1] Source: Morningstar.



Winners and losers

Periodic Table of Dow Jones U.S. Total Market Economic Sector Asset Class Returns (2003-2012)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
BEST	Technology 51.0%	Oil & Gas 32.4%	Oil & Gas 34.1%	Telecom 36.8%	Oil & Gas 34.8%	Healthcare -22.8%	Basic Materials 65.51%	Basic Materials 31.73%	Utilities 19.15%	Financial 26.85%
	Basic Materials 35.7%	Utilities 24.0%	Utilities 15.4%	Oil & Gas 22.8%	Basic Materials 32.9%	Consumer Goods -25.7%	Technology 64.48%	Industrials 26.02%	Healthcare 11.75%	Consumer Services 24.17%
	Industrials 33.2%	Telecom 18.7%	Healthcare 8.3%	Utilities 21.3%	Utilities 17.8%	Utilities -30.3%	Consumer Services 33.68%	Consumer Services 23.72%	Consumer Goods 8.80%	Healthcare 19.26%
	Consumer Services 32.6%	Industrials 17.3%	Financial 6.5%	Financial 19.4%	Technology 15.7%	Consumer Services -30.8%	Industrials 26.07%	Telecom 21.34	Consumer Services 7.14%	Telecom 19.00%
	Financial 32.2%	Financial 13.4%	Basic Materials 5.0%	Basic Materials 17.6%	Industrials 13.6%	Telecom -32.9%	Consumer Goods 23.86%	Oil & Gas 19.70%	Oil & Gas 4.11%	Industrials 17.87%
	Oil & Gas 25.7%	Basic Materials 13.1%	Industrials 4.8%	Consumer Goods 14.9%	Telecom 10.0%	Oil & Gas -35.8%	Healthcare 21.71%	Consumer Goods 19.50%	Technology 0.16%	Consumer Goods 12.80%
	Utilities 24.9%	Consumer Goods 13.0%	Technology 3.3%	Consumer Services 14.4%	Consumer Goods 9.7%	Industrials -39.6%	Oil & Gas 17.26%	Financial 12.72%	Industrials -0.79%	Technology 12.08%
	Consumer Goods 24.3%	Consumer Services 10.3%	Consumer Goods 2.0%	Industrials 13.9%	Healthcare 8.4%	Technology -42.9%	Financial 17.11%	Technology 12.58%	Telecom -6.93%	Basic Materials 10.49%
	Healthcare 19.4%	Healthcare 4.6%	Consumer Services -1.9%	Technology 10.1%	Consumer Services -7.2%	Financial -50.4%	Utilities 12.58%	Utilities 7.80%	Financial -12.84%	Oil & Gas 4.71%
WORST	Telecom 7.3%	Technology 1.8%	Telecom -4.0%	Healthcare 6.9%	Financial -17.7%	Basic Materials -50.8%	Telecom 9.85%	Healthcare 4.52%	Basic Materials -14.72	Utilities 1.76%

Source: Dow Jones Indexes

Dow Jones U.S. Total Market Index

- The Dow Jones U.S. Total Market Index represents 95% of the investable US equity market and is part of the Dow Jones Global Indexes (DJGI), a family of comprehensive global indexes constructed to provide broad market coverage by world, region and country. Characteristics of the Dow Jones U.S. Total Market Index are as follow:
- Consists of 10 Sector indexes - Basic Material, Consumer Goods, Consumer Services, Financials, Health Care, Industrials, Oil & Gas, Technology, Telecommunications and Utilities.
- Complete asset class representation - consistent coverage of large-cap, mid-cap and small-cap stocks.
- Float-adjusted market capitalization - accurately represents "investable" shares available for public purchase.
- Quarterly component review - clearly stated rule-based regular review provides transparency and ensures invest ability of the Index.
- Includes growth-oriented and value-oriented stocks.

"What is strong and what is weak is not a matter of opinion , but of arithmetic… It is no exaggeration to say that relative strength study is the most important single means of technical analysis."

Daniel R. Merkle
Relative Strength and Stock Market Timing

Sector trading strategies

- **Relative strength** is a way of measuring the performance of one sector in relation to other sectors over time. Sectors tend to have high relative strength rankings before major price moves.
- **Momentum investing** involves buying sectors that are rising in value on the principle that an object in motion will remain in motion until acted upon by an outside force.
  - Sectors that lead a rising market also tend to fall faster and farther than the market as a whole.

The volatility of sectors requires active management.

"Far more money is made buying high and selling at even higher prices."

Richard Driehaus
Founder of Driehaus Capital Management, Inc., widely considered the father of momentum investing

Can investors turn losses to profits?

S&P 500 Bear Markets	Duration	% Decline	Time to Breakeven
May 46 - Mar 48	22 months	-28.1	4.1 years
Aug 56 - Oct 57	14 months	-21.6	2.1 years
Dec 61 - Jun 62	6 months	-28.0	1.8 years
Feb 66 Oct 66	8 months	-22.2	1.4 years
Nov 68 - May 70	18 months	-36.1	3.3 years
Jan 73 - Oct 74	21 months	-48.2	7.6 years
Nov 80 - Aug 82	21 months	-27.1	2.1 years
Aug 87 - Dec 87	4 months	-33.5	1.9 years
Jul 90 - Oct 90	3 months	-19.9	.6 years
Sep 00 – Mar 03	30 months	-49.0	6.8 years
Oct 07 – Mar 09	17 months	-50.9	3.0 years

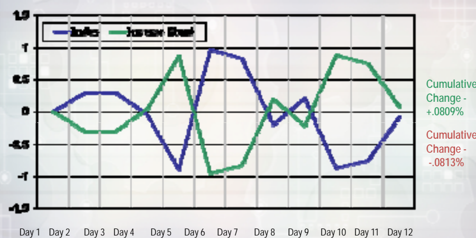
Tools to turn losses to profits

- Invest in funds that "short" a market index
  - Bear funds
  - Inverse funds
  - Leveraged inverse funds
- Use hedging strategies
  - Strategically use instruments in the market to offset the risk of any adverse price movements.
  - Most hedging techniques use financial instruments known as derivatives, the two most common of which are options and futures.

Bear fund example

- Takes short positions in individual stocks and market proxies.
- Purchases put options to benefit from anticipated declines in stocks or market indexes.
- Long positions might consist of gold, or stocks that typically perform better in market downturns.

Example of an inverse fund



This is a hypothetical example and is used for illustrative purposes only. It is important to realize that after day one - due to the impact of compounding - an inverse fund's return will never exactly mirror its index.

Hedging with put options and futures

- A put option gives the buyer the right to sell a number of shares of stock at a pre-determined price until the option's expiration date.
- Put options lose value in flat or rising markets, but increase exponentially in value in a falling market.
- A futures contract is a legally binding agreement to buy or sell a specific commodity or financial instrument on a particular date in the future at an agreed upon price.

Successful investing requires structure

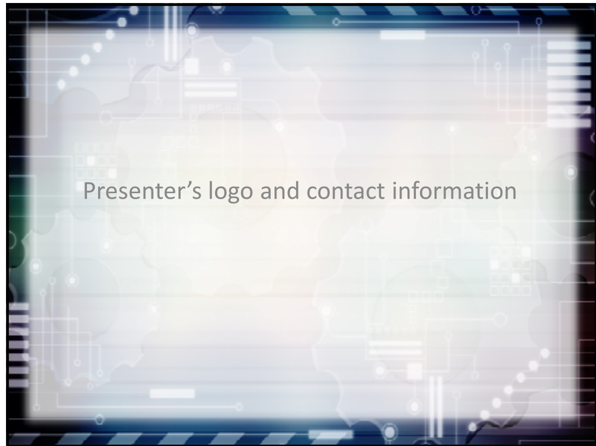
- The right investment strategy is the one that works with the investor's abilities, personality and knowledge.
- Successful investing requires a carefully considered plan of action based on market knowledge, non-emotional trading rules and the discipline to stick with the strategy.
- There is no perfect investment approach. All investment strategies will have unsuccessful trades.

A successful strategy is one in which winning trades more than offset losses.

Risk is a part of every investment

- *All investments have the potential for loss as well as profit.*
- *An investment approach that sounds too good to be true generally is.*
- *The information provided here is intended to be general in nature and should not be construed as investment advice or as a recommendation of any specific fund, security or investment approach.*

Too conservative of an investment approach could leave your greatest risk that of running out of money in retirement.


Presenter’s logo and contact information