# CAMBRIA

Investment Management for High Net Worth Individuals and Institutions

www.cambriainvestments.com

## Disclaimer

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# What Do We Know, 1900

- 1. Most people invested in bonds, not stocks
- 2. Returns came from dividends, not capital gains
- 3. Stocks & bonds returned the same
- 4. No risk-free investment
- 5. Yields declining, no overall inflation



# What Do We Know, 2000

- 1. Most people invested in stocks, not bonds
- 2. Returns came from capital gains, not dividends
- 3. Stocks & bonds did not return the same
- 4. No risk-free investment
- 5. Yields increasing, no overall inflation



# What Have We Always Known

- 1. Markets can, and do, go to zero
- 2. Inflation is your greatest enemy
- 3. Financial market returns are extreme
- 4. Bubbles are common



### I can calculate the motion of heavenly bodies...



# SF, 2/2011

### Asset Allocation

### Market Timing

### Security Selection













Return	s 1985-20	09, (Jun	e 30 <sup>th</sup> )
1985 to 2009	HARVARD	YALE	S&P 500
Return	13.13%	14.58%	10.14%
Volatility	12.69%	13.21%	17.15%
Sharpe (5%)	0.64	0.73	0.30



### Asset Allocation

- Long term focus
- •Tax exempt
- •Focus on getting asset allocation right
- Active Management
- Alternatives



### El Erian

Q:"Can an individual investor hope to replicate the results of the top endowments?"

A:"It would be like advising my son or daughter to drop out of school to play basketball with the goal of becoming the next Michael Jordan."



### Rough Allocations



	Harvard + Yale	IVY	El-Erian	Swensen
<b>Domestic Stocks</b>	20%	20%	20%	30%
Foreign Stocks	30%	20%	30%	20%
Bonds	15%	20%	20%	30%
Real Estate	15%	20%	15%	20%
Commodities	20%	20%	15%	0%
Total	100%	100%	100%	100%



### Various Allocations

1985 to 2009	HARVARD	YALE	IVY
Return	13.13%	14.58%	9.82%
Volatility	12.69%	13.21%	12.26%
Sharpe (5%)	0.64	0.73	0.39
BestYear	32.20%	41.00%	34.25%
WorstYear	(27.30%)	(25.00%)	(31.10%)
Correl Har	1.00	0.95	0.90
Correl Yale	0.95	1.00	0.86



### Hedge Funds

- Transparency
- •Fraud
- •Lock-ups, Illiquid,
- Minimums
- •Tax Management
- •Best Managers Closed



### The Swedish Dr.



- 20% return, after 2% & 20% = 14.4%
- 14.4% return, after 1% and 10% = 12%
- Managers have to return 20% to have better performance than buy and hold. . .pre-tax



### VC Vintage Years 1986-2003



### Buyout Vintage Years 1986-2003



Source: Cambridge Associates

### Summary Part I

 Harvard & Yale have had consistent exceptional performance, +4%

Highly correlated at .91

•Less traditional asset classes, more real assets and alternatives – active management

•Buy and hold without alternatives cannot replicate the endowment performance



# SF, 2/2011

### ► Asset Allocation

### ➢Market Timing

### Security Selection





### Diversification Works, Until it Doesn't



### Diversification Works, Until it Doesn't



# Market Timing

### "The first rule is not to lose. The second rule is not to forget the first rule."

### -Warren Buffett



# Gains Needed to Get Back to Even Following a Loss

Loss	Gain to get back to even
-10%	+11%
-20%	+25%
-50%	+100%
-75%	+300%



### 2008 & 2009 – Buy and Hope?

- US Stocks:
- Foreign Stocks:
- **Real Estate:**
- Commodities:
- Govt. Bonds:
- Buy and Hold:

-36.77% -43.06%

-37.33%

-46.49%

19.23%

-30.09%

2008 Returns Max Drawdown -50.77% -56.40% -67.88% -67.64% -7.98%

-46.02%

#### Four Bad Bear Markets

dshort.com 2/4/2011

Dow in 1929-1932; S&P 500 in 1973-74, 2000-02, 2007-09

nominal price excluding dividends



0 1 2 3 6

4 5 8

7

# Bad Timing

- Past 20 years investors in stock mutual funds have underperformed the S&P500 by 6.5% a year. (8.35% vs. 1.37%.) That return doesn't even keep up with inflation (2.9%)
- They did even worse in bonds, underperforming the Barclay's Aggregate by 6.7% a year. (7.43% vs. 0.77%.)

SOURCE: DALBAR 2009



# Cambria's Approach

 "A Quantitative Approach to Tactical Asset Allocation" – 2007 *Journal of Wealth Management*

• Attempts to achieve similar returns as buy and hold with much less risk.



### "Either you understand your risk or you don't play the game." - Arthur Ashe







- Simple
- Non-Optimized
- Price Based Only



# Don't Be a Rube (Goldberg)



# Buy & Sell Rules

### BUY RULE

Buy when monthly price > 10-month SMA.

### SELL RULE

Sell and move to cash when monthly price < 10-month SMA.



### Simple Trendfollowing 1600 1400 S&P 500 1200 --- 10-month moving average 1000 800 600 400 200 0 1/31/1990 1/31/1995 1/31/2000 1/31/2005

# Ray Dalio, Bridgewater

"Because I believe that all criteria for investing (that is, good betting strategies) should have a logic that isn't time specific, I believe that the alpha generators that make up the ultimate alpha generator should be timeless and universal. By that I mean that they should have worked over very longtime horizons and in all countries' markets."













Buy and Hold vs. Timing 1973-2010				
	Buy & Hold	TIMING		
Returns	10.11%	11.10%		
Volatility 10.27% 7.01%				
Sharpe – 6%	0.43	0.76		
MaxDD	(46.02%)	(9.53%)		
Best Year 26.58% 26.20%				
Worst Year	(30.09%)	(0.59%)		



### Buy and Hold vs. Timing 1973-2010



# % Invested

# of	% Invested	# of	% of
Positions		Months	Months
0 (all cash)	0%	5	1.16%
1	20	20	4.63%
2	40	52	12.04%
3	60	94	21.76%
4	80	164	37.96%
5	100	97	22.45%
Total		432	100%

1973-2010	B&H	TIMING	TIMING 2X
Returns	10.11%	11.10%	15.28%
Volatility	10.27%	7.01%	14.10%
Sharpe – 5.7%	0.43	0.76	0.67
MaxDD	(46.02%)	(9.53%)	(21.91%)
Best Year	26.58%	26.20%	46.12%
Worst Year	(30.09%)	(0.59%)	(5.40%)



	—S&P 500
	O% cash
	—20% cash
	—40% cash
7000	—60% cash
	-100% cash
	-1.5X
	-2X
700	and the second s
70	9/30/1973 6/30/1975 6/30/1975 9/30/1975 9/30/1976 6/30/1978 9/30/1986 6/30/1988 6/30/1988 6/30/1988 6/30/1988 6/30/1988 6/30/1988 6/30/1988 6/30/1998 6/30/1998 6/30/1998 6/30/1998 6/30/1998 3/31/1999 9/30/1998 6/30/1998 3/31/1996 6/30/1998 3/31/1999 12/31/1996 6/30/1998 3/31/1996 6/30/1998 3/31/1996 6/30/1998 12/31/1996 6/30/1998 12/31/1996 6/30/1998 12/31/1996 6/30/1998 12/31/1996 6/30/1998 12/31/1996 6/30/1998 12/31/1996 6/30/1998 12/31/1996 6/30/1998 12/31/1996 6/30/1998 12/31/1996 12/31/1996 12/31/1996 12/31/1996 12/31/1996 6/30/1998 12/31/1996 12/31/199

# Trade Distribution



# Tax Harvesting

	IVY	ETFs	ETFs
Domestic Stocks	20%	SPY	VTI
Foreign Developed Stocks	20%	EFA	VEU
Bonds	20%	AGG	BND
Real Estate	20%	IYR	VNQ
Commodities	20%	DBC	RJI



- Prospect Theory (Kahneman & Tversky)
- Human more readily realize gains than losses
- Sell winners too early, hold on to losers too long



Volatility Clustering, 1900-2008 US Stocks					
Asset Class	Market > 10	Market < 10	Difference		
	month	month			
% of time	69.88%	30.12%			
Annualized Return	14.42%	3.03%	-78.98%		
Annualized Volatility	14.30%	24.18%	69.06%		



#### Hypothetical Published Model Real Time Results





# IMPROVEMENTS

•More asset classes & timeframes

•Granularity within asset class

•More technical inputs

•Fundamental inputs

•Reversion systems

# Security Selection

•Most people stink at stock picking

### •"Capitalism Distribution"



•Why not let Warren Buffett manage your portfolio?

# 13F Analysis

•Institutions & hedge funds must report their holdings

### •Quarterly, with a 45 day delay

•Invest in the top 10 holdings, equal-weighted, and rebalanced quarterly



Performance Statistics

Max Annual Data

		ANNUALIZED		Sharpe	
	Total Return	Return 🛛	Volatility 🛙	Ratio (4%)	Max Drawdown
Top 10 Holdings	118.0%	7.5%	15.6%	0.2	<mark>-44.7%</mark>
Index	-4.1%	-0.4%	16.4%	-0.3	-50.9%

Q/Q Turnover (avg. prior 4) 🛙	5.0%
Alpha 🛿	6.5
Beta 🛿	0.7
Correlation to Index 🛿	0.7



Source: AlphaClone

#### Rank Clone against S&P 500 (SPXTR)





•

Performance Statistics Max

Annual Data

	Total	ANNUALIZED		Sharpe Ratio	Max
Top 10 Pop <mark>u</mark> larity	Return @ 402.1%	16.2%	17.6%	(4%)	-39.7%
Index	-4.1%	- <mark>0.4%</mark>	16.4%	-0.3	-50.9%

Q/Q Turnover (avg. prior 4) 🛛	47.5%
Alpha 🛿	15. <mark>8</mark>
Beta 🛿	0.8
Correlation to Index 🛙	0.8



Source: AlphaClone









## SUMMARY

•Investors get paid to take on risk (in the long run, but it matters what you pay)

•Diversification helps, but you can't count on it

•A simple tactical approach can help reduce volatility and drawdown



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# About Cambria

- Registered Investment Advisor founded in 2006
- Fee Based Separately Managed Accounts

• Private Funds

• Global Tactical ETF (NYSE:GTAA)

