

# **Seasonal Investing**

By Bob Krishfield

June 29, 2010

# Mechanical Trading Systems

- Trend Following
  - Moving Average CrossOver, Bollinger Breakouts
- Mean Reversion
  - Oscillators, Stochastics, MACD
- Seasonal
  - Annual Seasons, Day of Month, Lunar, Presidential Cycle
- Pattern
  - Chart Patterns, Cup-In-Handle, Head&Shoulders, Cycles

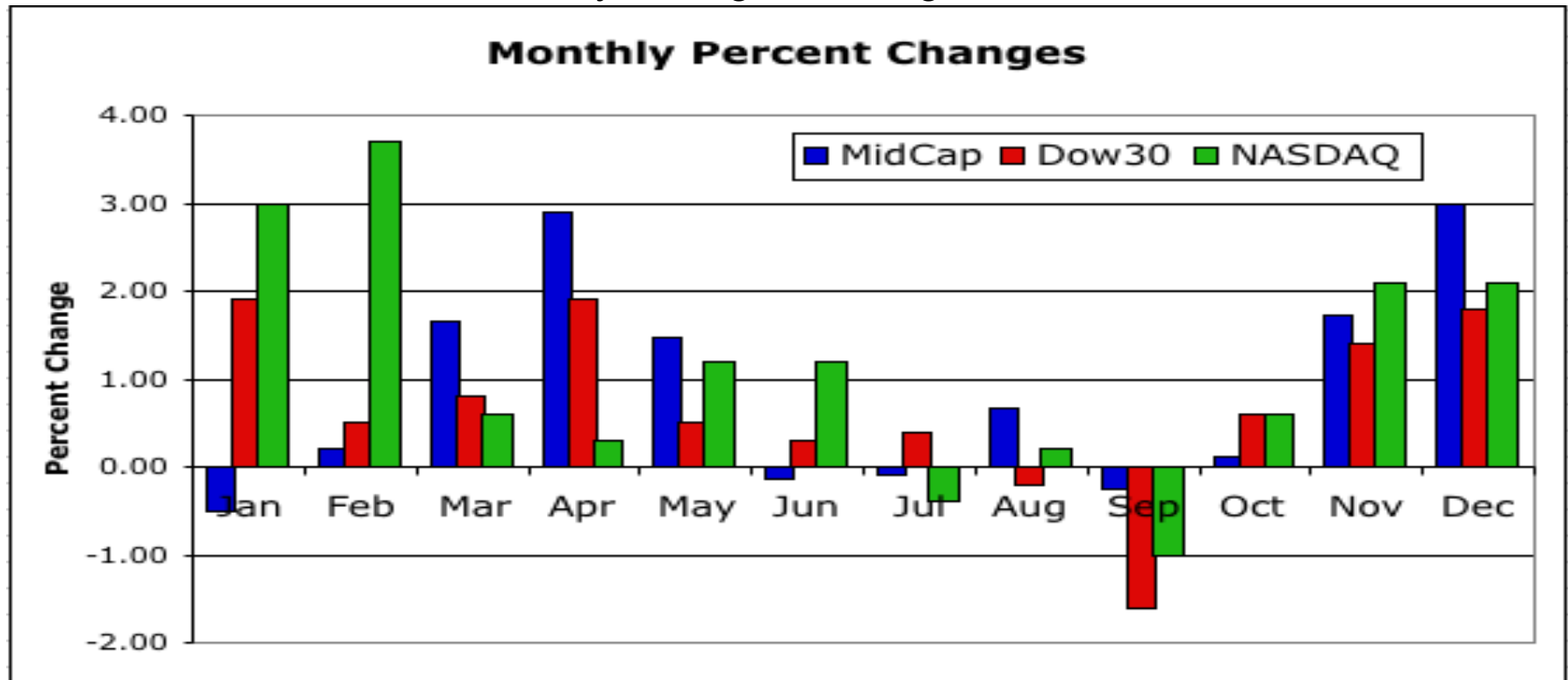
From: Howard Bandy, "Quantitative Trading Systems"

# Today's Agenda

- Seasonal Models
  - Sell in May and Go Away (Nov - Apr in Market)
  - Best 6 Months Switching with Short Term Timing
- Presidential Cycle Models
  - Alpha Formula - Switch Investments at Selected Periods of Cycle
  - Don Bell's Improvements to Alpha Formula
- Ideas for Further Study

# Annual Seasonality Patterns

Percent Monthly Changes Averaged from 1971 - 2008

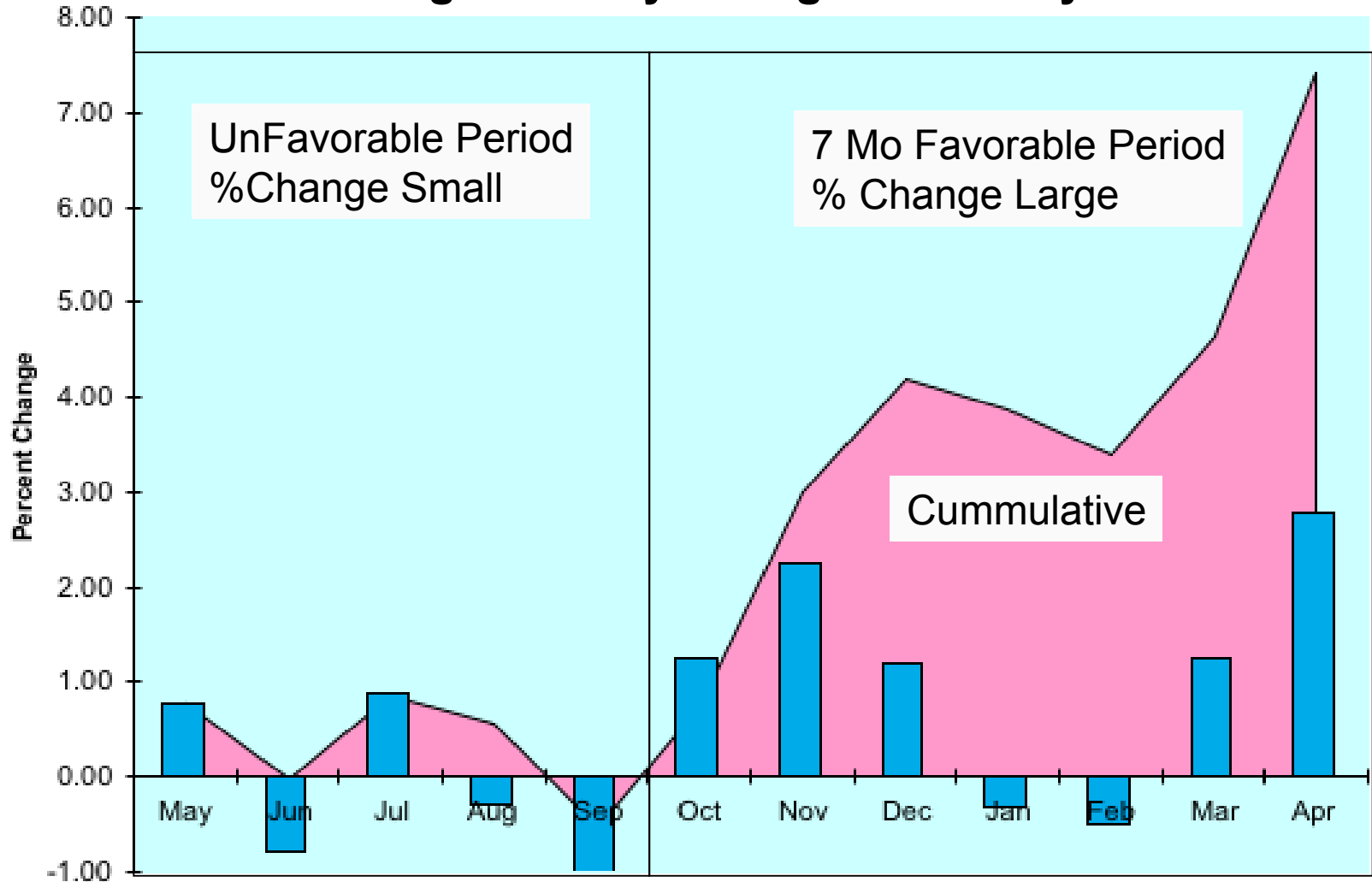


What Forms Patterns ?

- End of Fiscal Year in Sep, New Budget in Oct
- Portfolio Managers Making Reports Look Good

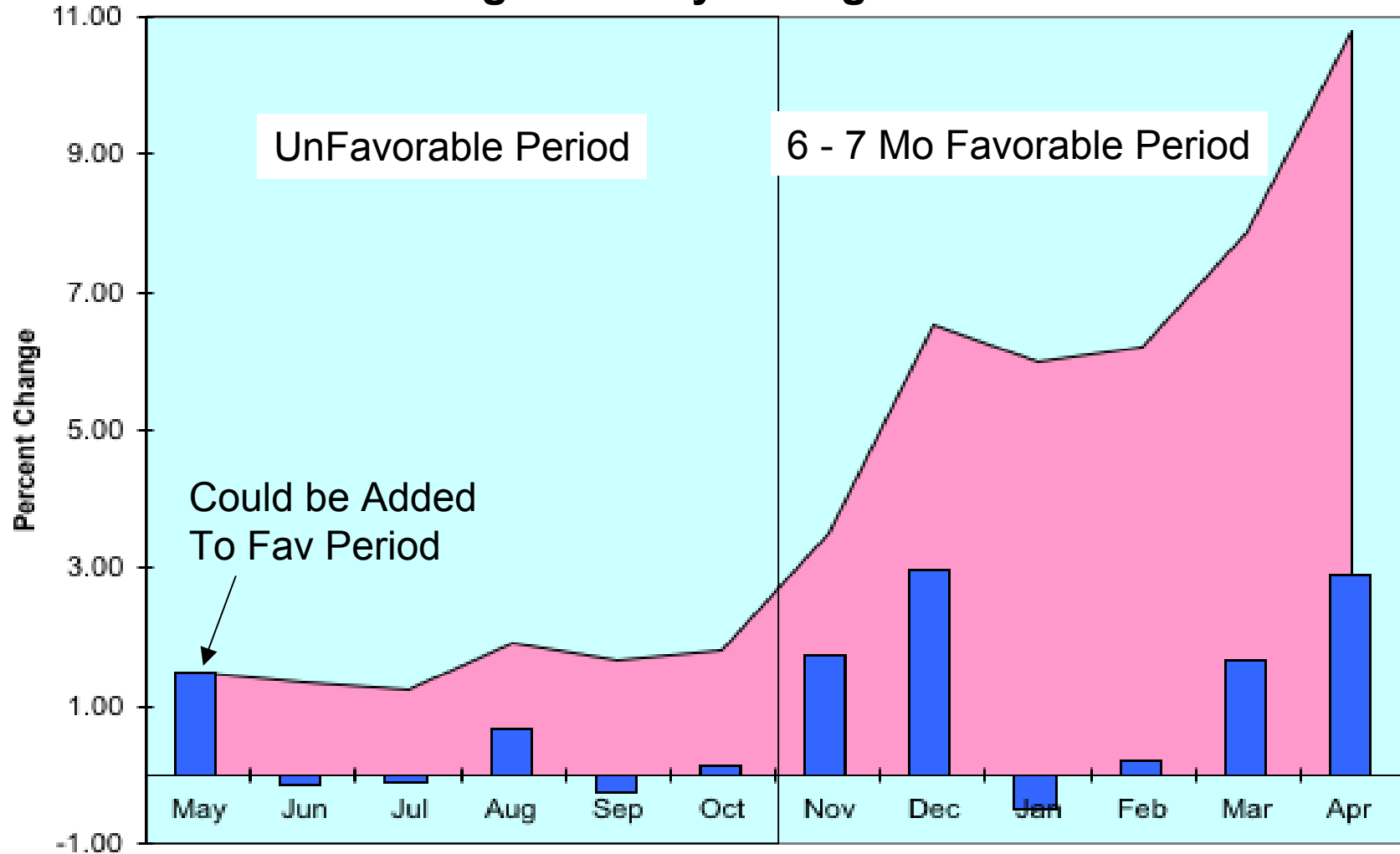
# Sell-in-May Cycle

## Dow Average Monthly Changes over 15 yrs



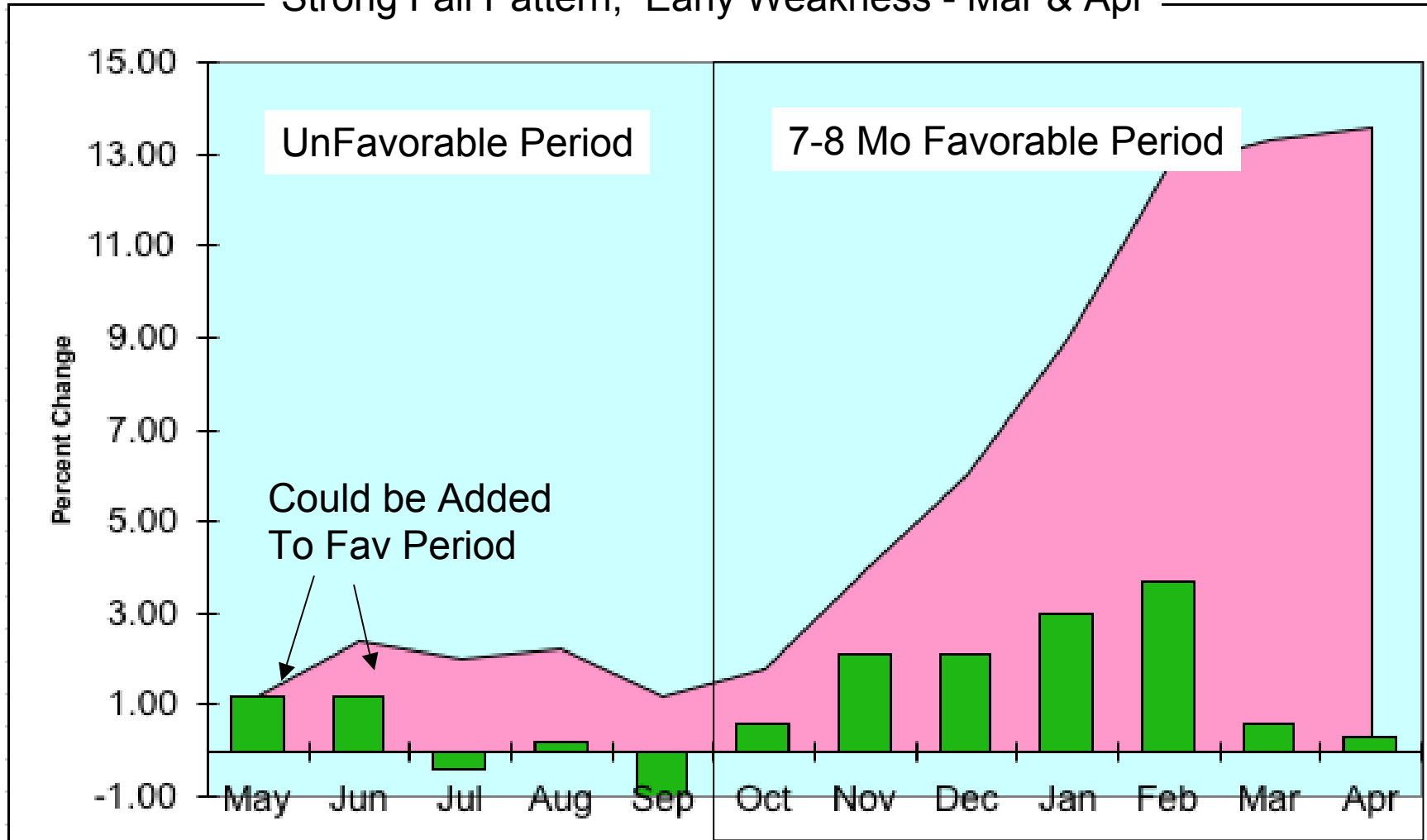
# MidCaps Season - Shorter Stronger

## SP400 Average Monthly Changes over 15 Yrs



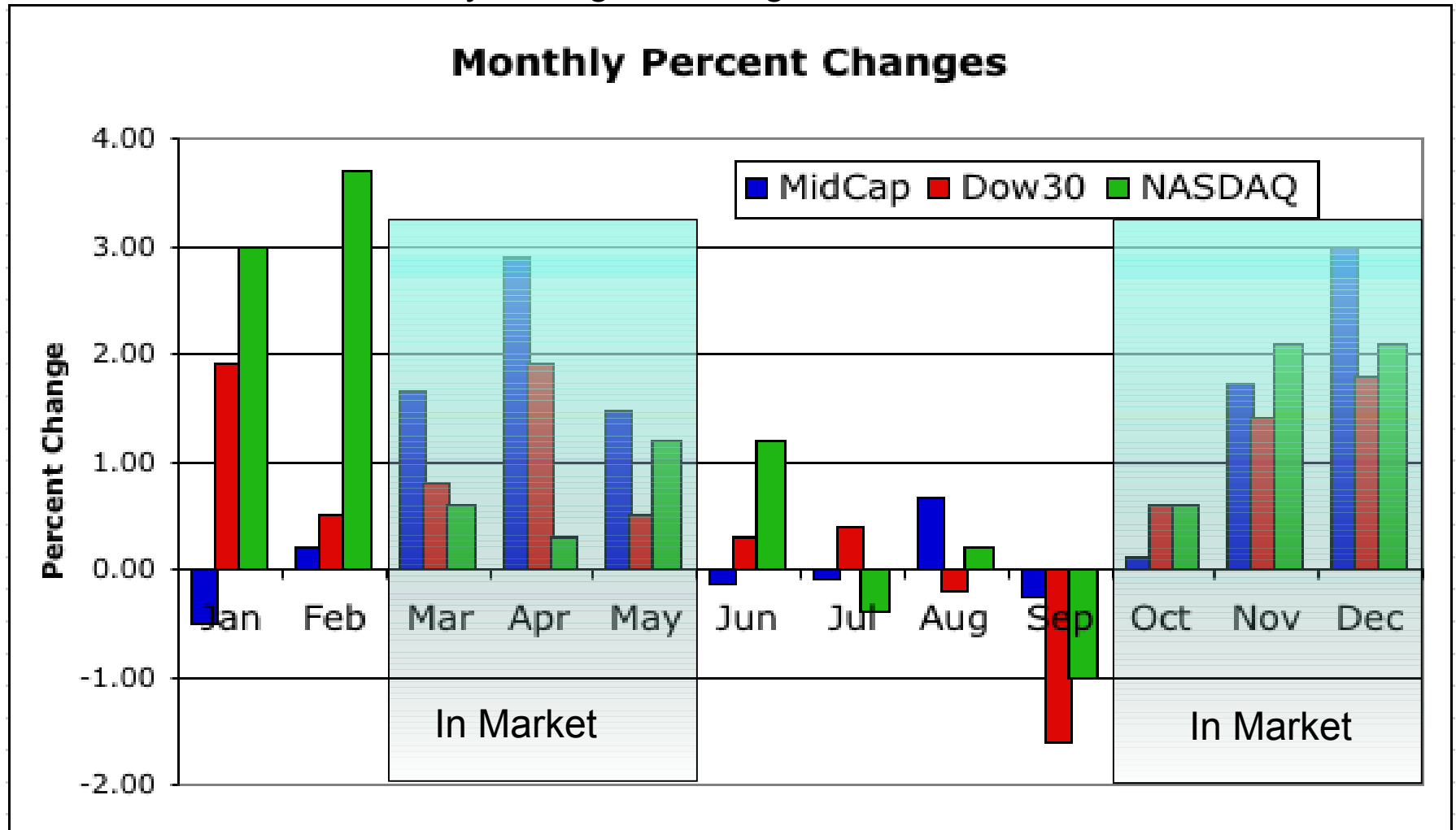
# NASDAQ Annual Pattern

Strong Fall Pattern, Early Weakness - Mar & Apr



# Picking Seasonality Patterns

Percent Monthly Changes Averaged from 1971 - 2008





# Trading SP400

In Market Oct-Dec & Mar-May  
Trades Based Only on Calendar



# Sell in May (or June) Results

Table Shows Months In Market for 15.5 Years (1994 - 2010)  
Used 3% for Cash When Out of Market

CAR / MDD

Changing Season Pattern - In/Out Dates					
Market	Nov-Apr	Oct-Apr	Oct-May	Oct-Dec Mar-May	Buy & Hold
DOW30	8.6 / -32	9.5 / -43	9.3 / -46	11.4 / -33	6.4 / -53
MIDCAP	10.9 / -31	11.2 / -47	12.1 / -45	12.5 / -42	9.4 / -56
NDX	8.4 / -64	11.7 / -67	11.3 / -70	12.0 / -67	9.9 / -82
SPX-NDX	8.1 / -47	10.2 / -49	10.0 / -52	11.4 / -49	8.2 / -69
Adding Features to Improve Return, Reduce DD					
Market	Oct-Dec Mar-May	Add StopLoss	MACD Timing	MACD &StopLoss	Repl Cash w/ Bonds
DOW30	11.4 / -33	11.3 / -26	9.4 / -21.4	14.9 / -20	14.6 / -33
MIDCAP	12.5 / -42	13.6 / -19	11.6 / -28.3	16.6 / -23	16.0 / -43

# Annual Season Models Limited

- Gains Limited to 10 - 12% without Timing
  - MACD Improves Returns to 16%
    - Requires Daily Analysis
    - Trades Not Based Just on Calendar
- Popular Versions
  - Yale & Jeff Hirsch - “Investors Almanac”
    - Discovered Best 6 Months In / 6 Out Strategy
  - Sy Harding - [www.streetsmartreport.com](http://www.streetsmartreport.com)
    - Added MACD to time entry and exits at scheduled Seasonal Periods

# So Can I Use Seasonality to My Advantage?

Look at Other Strategies

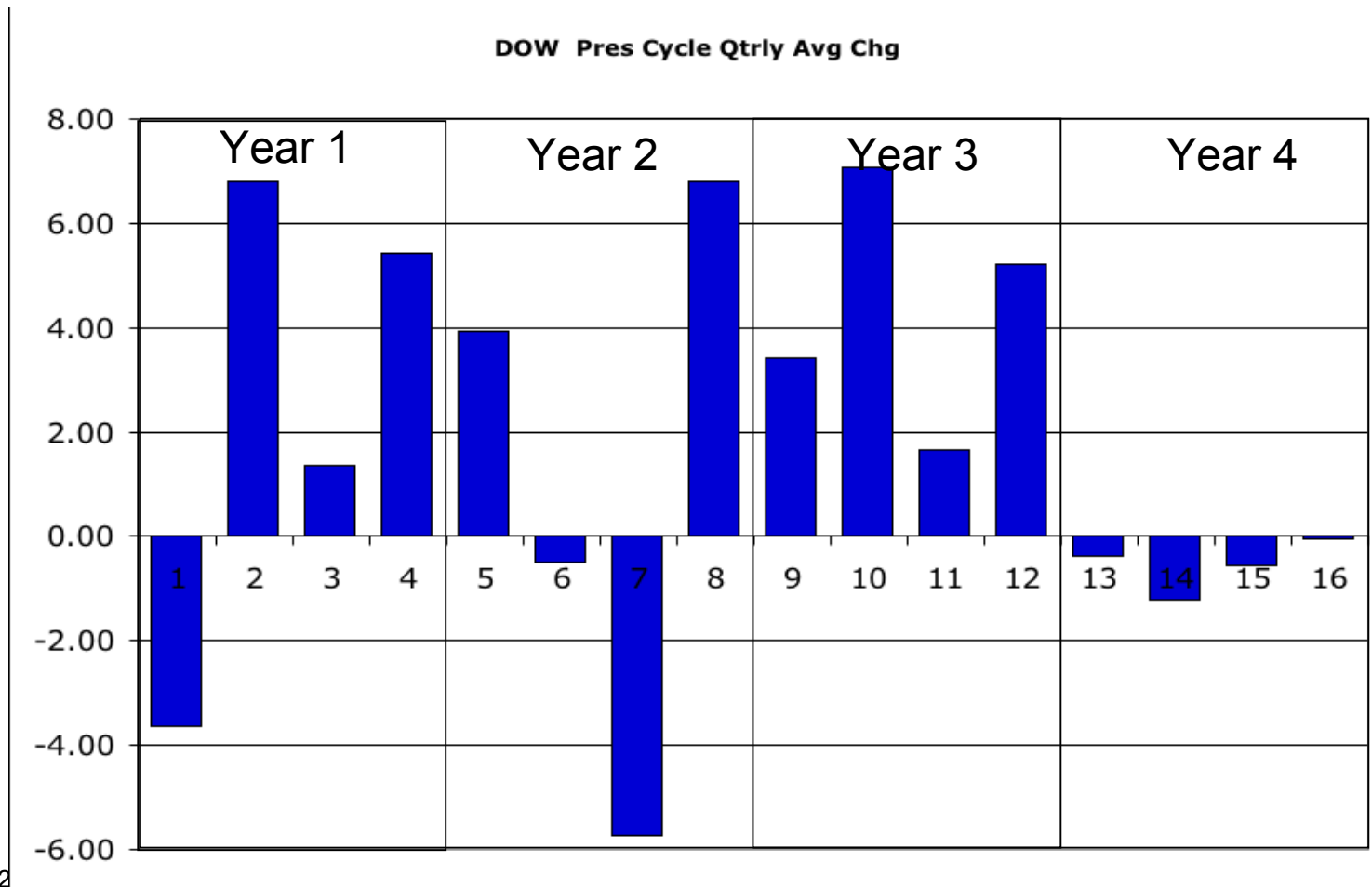
Sector Rotation

Market Rotation Across Asset Classes

Other Cyclic Behavior

# Presidential Cycle Model

Model Trades In / Out of Market Based on 4 Yr Presidential Cycle Switches Assets to Match Performance for Period.

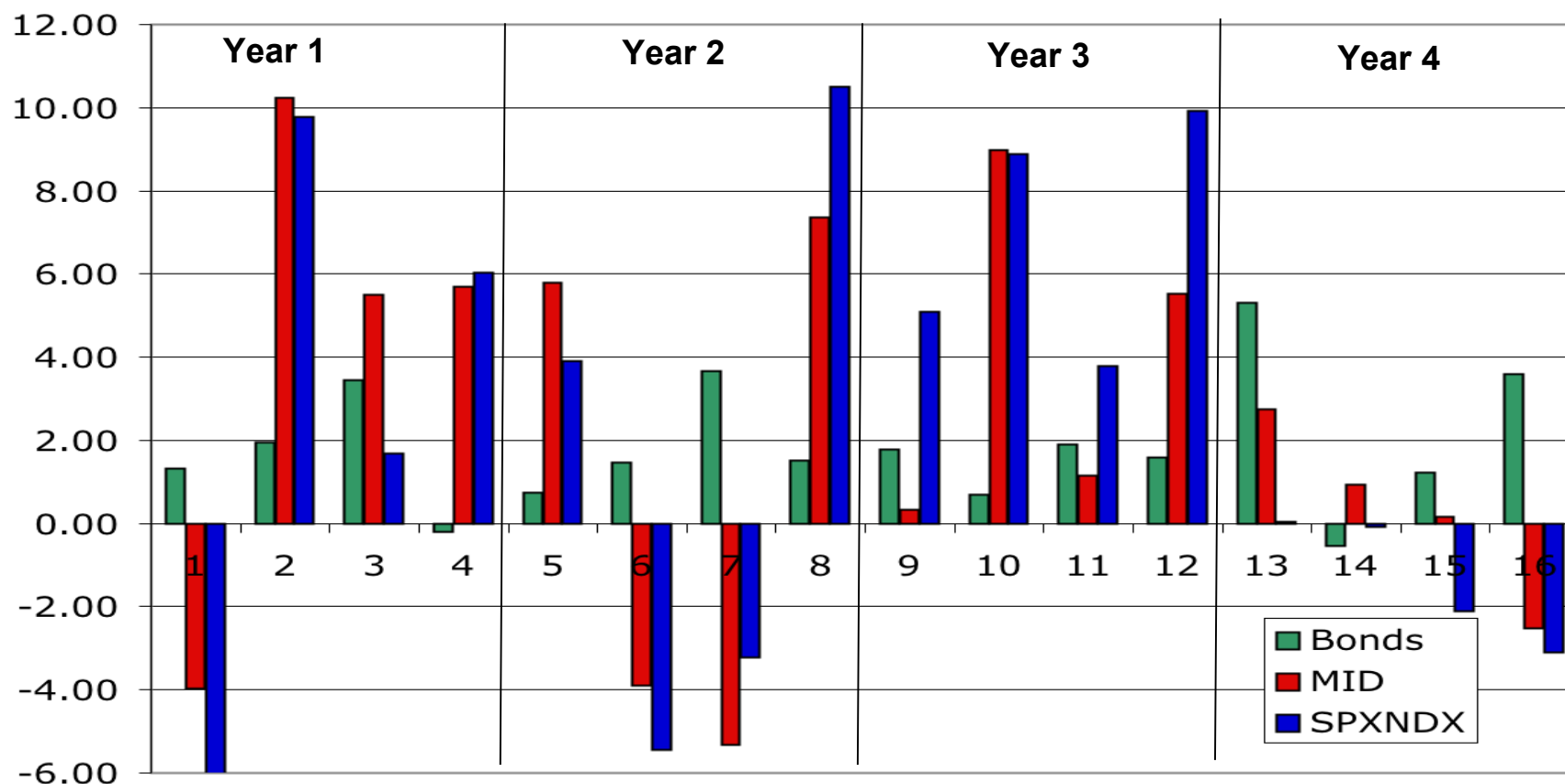


# Alpha's\* Trading Schedule - Modified

Switch to High Growth in Strong Qtrs (Q8 -12)

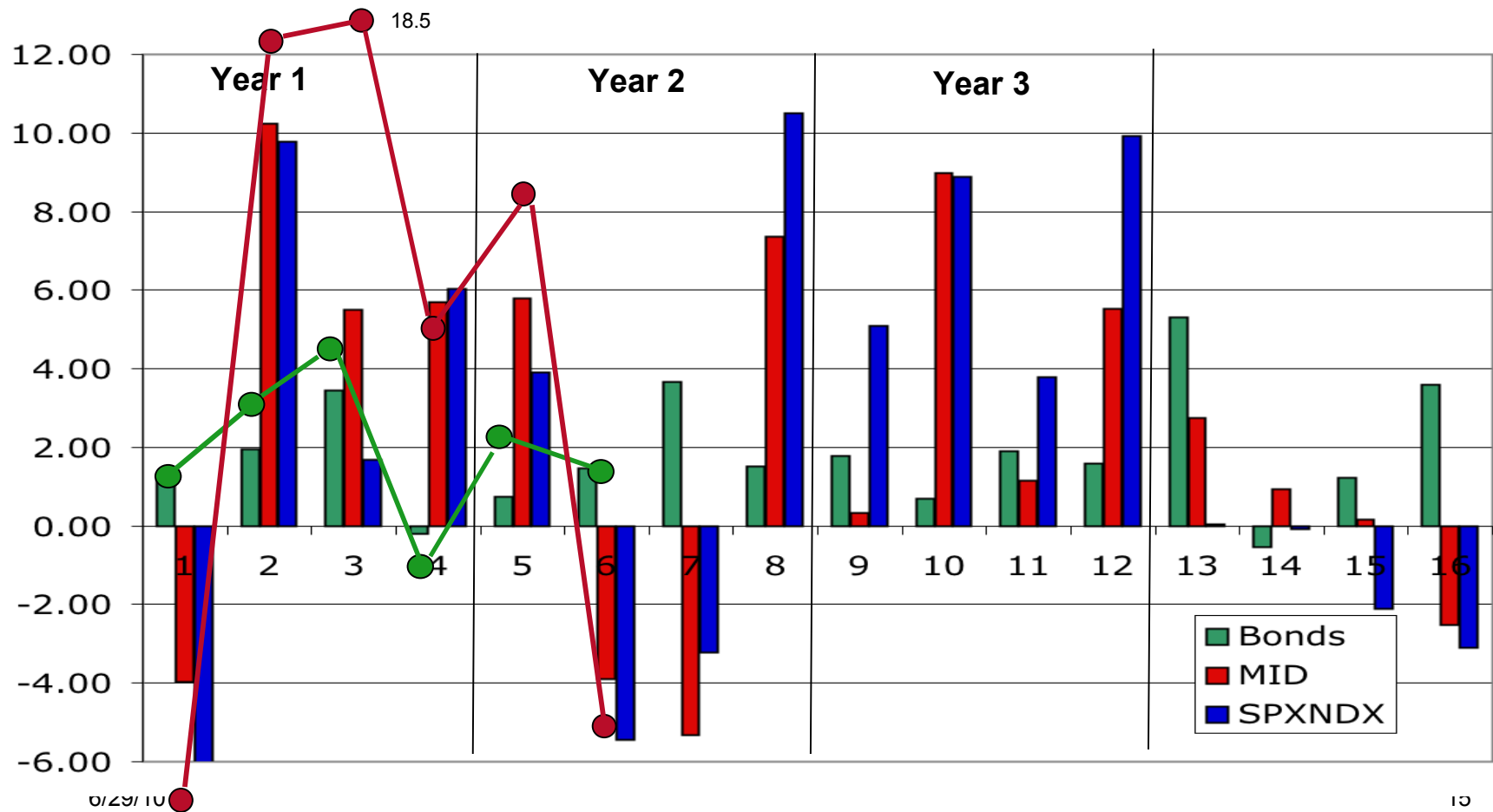
Switch to Mid-Caps in Slow Growth (Q2, Q4-5, Q14, Q16)

Switch to Bonds in No Growth Quarters ( Q1, Q3, Q6-7,Q13, Q15-16)



# Where We Are Now

June 2010 = Year 2, Q6 In Bonds  
 Until Q8 Then High Growth



# Alpha Model Schedules

Original PRESCYCLE MODEL - Alpha

	Year 1				Year 2				Year 3				Year 4			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bonds			B				B								B	
MidCap	B	B		B	B	B							B	B		B
HiGrowth								B	B	B	B	B				

CAR = 19.9% MDD 28% (15.5 years) 80% exposure

Revised PRESCYCLE MODEL -V2

	Year 1				Year 2				Year 3				Year 4			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bonds	B		B			B	B						B		B	B
MidCap		B		B	B									B		
HiGrowth								B	B	B	B	B				

CAR = 23% MDD 14.7% (15.5 years) 98.5% exposure



# Pres Cycle Trades -1

	Year 1				Year 2				Year 3				Year 4			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bonds	B		B			B	B						B		B	B
MidCap		B		B	B									B		
HiGrowth								B	B	B	B	B				

1994
1995
1996

1997
1998
1999

2001
2002
2003

2005
2006
2007

2000
2004
2008

1	Ticker	Trade	Date	Ex. date	% Profit	Cum. Profit	# bars	MAE	MFE
2	~bond1	Long	4/4/94	10/3/94	-0.83%	-\$836	127	-1%	3%
3	~SPXNDX	Long	10/3/94	1/2/96	42.25%	\$41,161	316	-3%	43%
4	~bond1	Long	1/2/96	4/1/96	-4.08%	\$35,399	64	-5%	0%
5	!MID	Long	4/1/96	7/1/96	2.58%	\$38,903	64	-3%	5%
6	~bond1	Long	7/1/96	4/1/97	3.94%	\$44,381	190	-2%	7%
7	!MID	Long	4/1/97	7/1/97	15.30%	\$66,514	65	-1%	16%
8	~bond1	Long	7/1/97	10/1/97	4.49%	\$73,996	65	0%	4%
9	!MID	Long	10/1/97	4/1/98	11.97%	\$94,852	126	-10%	12%
10	~bond1	Long	4/1/98	10/1/98	7.82%	\$110,100	128	-1%	8%
11	~SPXNDX	Long	10/1/98	1/3/00	111.07%	\$343,729	317	-7%	111%
12	~bond1	Long	1/3/00	4/3/00	4.77%	\$364,916	64	-1%	5%
13	!MID	Long	4/3/00	7/3/00	2.29%	\$375,566	64	-11%	6%
14	~bond1	Long	7/3/00	4/2/01	10.64%	\$426,184	189	-1%	12%
15	!MID	Long	4/2/01	7/2/01	14.64%	\$503,241	64	-4%	22%
16	~bond1	Long	7/2/01	10/1/01	5.30%	\$535,227	60	0%	5%
17	!MID	Long	10/1/01	4/1/02	27.50%	\$710,009	125	-1%	28%

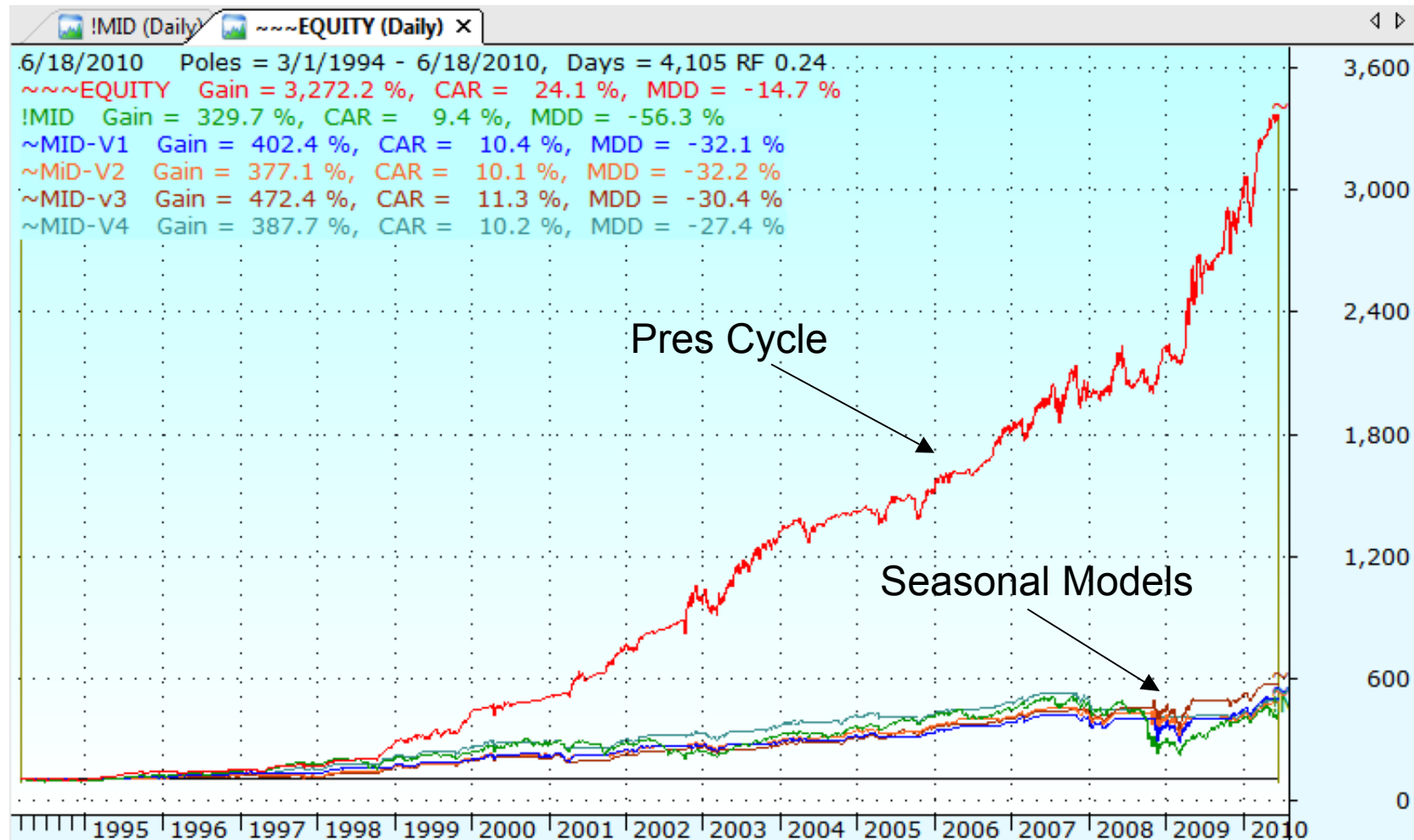
# Pres Cycle Trades -2

	Year 1				Year 2				Year 3				Year 4			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bonds	B		B			B	B						B		B	B
MidCap		B		B	B									B		
HiGrowth								B	B	B	B	B				
	2001				2002				2003				2004			
	2005				2006				2007				2008			
	2009				2010											

18	Ticker	Trade	Date	Ex. date	% Profit	Cum. Profit	# bars	MAE	MFE
19	~bond1	Long	4/1/02	10/1/02	9.91%	\$790,293	129	0%	10%
20	~SPXNDX	Long	10/1/02	1/2/04	48.71%	\$1,224,049	317	-8%	49%
21	~bond1	Long	1/2/04	4/1/04	3.62%	\$1,271,992	63	0%	5%
22	!MID	Long	4/1/04	7/1/04	-1.40%	\$1,252,827	63	-8%	1%
23	~bond1	Long	7/1/04	4/1/05	5.26%	\$1,324,000	190	0%	7%
24	!MID	Long	4/1/05	7/1/05	5.06%	\$1,396,028	65	-5%	6%
25	~bond1	Long	7/1/05	10/3/05	-1.06%	\$1,380,172	65	-2%	1%
26	!MID	Long	10/3/05	4/3/06	9.82%	\$1,525,593	126	-8%	10%
27	~bond1	Long	4/3/06	10/2/06	4.40%	\$1,597,100	127	-2%	4%
28	~SPXNDX	Long	10/2/06	1/2/08	16.94%	\$1,884,606	315	0%	26%
29	~bond1	Long	1/2/08	4/1/08	1.51%	\$1,914,502	62	-1%	3%
30	!MID	Long	4/1/08	7/1/08	1.87%	\$1,952,141	65	-3%	11%
31	~bond1	Long	7/1/08	4/1/09	8.35%	\$2,123,472	190	-2%	10%
32	!MID	Long	4/1/09	7/1/09	18.16%	\$2,527,289	64	-4%	22%
33	~bond1	Long	7/1/09	10/1/09	4.11%	\$2,635,164	65	-1%	4%
34	!MID	Long	10/1/09	4/1/10	19.02%	\$3,155,385	126	-3%	20%
35	~bond1	Open	4/1/10	6/18/10	3.58%	\$3,271,918	56	-1%	4%

# Alpha Pres Cycle Model

Profit = 3,272% CAR= 24.1% MDD -14.7% for 15.5 Years



# Don Bell's Improvements

- **Don Bell came up with a different investment mix.**
- **Based on four year election cycle:**
  - **Year1: Pimco Total Return (PTTDX) to 10/31 then SP MidCap (SP-MC)**
  - **Year2: SP-MC to 4/30 then PTTDX to 9/30 then JkNDX**
    - **Note Jknx is 1/3 of assets in Junk Bonds and 2/3rds NDX**
  - **Year3: JkNDX**
  - **Year4: PTTDX to 12/15 then SP-MC**
- **Results: 23% ANN with 11.9% MDD**
- **Old geezers put only 60% in the above system while the remainder 40% stays in PTTDX all the time.**
- **This Mix results in 17%Ann with 7.2%MDD from 1988.**

# Don Bell's Improvements

Revised PRESCYCLE MODEL -V2

	Year 1				Year 2				Year 3				Year 4			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bonds	B		B			B	B						B		B	B
MidCap		B		B	B									B		
HiGrowth								B	B	B	B	B				

CAR = 23% MDD 14.7% (15.5 years) 98.5% exposure

Don Bell's AForm MODEL

	Year 1				Year 2				Year 3				Year 4			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bonds	B	B	B			B	B						B	B	B	B
MidCap				B	B											
Jnk&NDX								B	B	B	B	B				

CAR = 23% MDD 11.9% (about 22 years)

Geezers Version = 60% Aform + 40% Pimco PTTRX

CAR = 17.4% MDD 7.7%

# Summary

<b>Model</b>	<b>Profit</b>	<b>CAR</b>	<b>MDD</b>	
Pres Cycle v2	3,272%	24%	-14.7%	1994 - 2010
Don Bell's ver	9,136%	23%	-11.9%	1988 - 2010
Annual Cycle MACD & Bonds	1,123%	16%	-23%	1994 - 2010

Presidential Cycle Model (and Don Bell's ver)  
Useable As-Is  
Easy to Implement - Calendar Based

Annual Cycle Model  
DrawDown High, Exceeds CAR  
Sell-in-May Good Trading Advice

# Future Work

- Code Don Bell's Model Features and Test
  - Junk Bonds in lieu of Growth
  - Changes in Schedules
- Refine Pattern Analysis of 4 year cycle
  - Breakdown into monthly increments
  - Overlay Annual Pattern onto 4 year cycle
- Try Using MACD for Timing of Trades