# USING SPREADSHEETS FOR RISK ASSESSMENT AND CONTROL

Dr. Bob Smithson

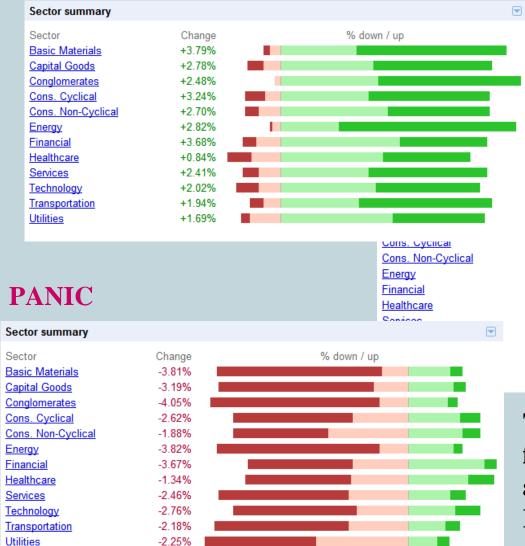
Anava Capital Management LLC 408-918-9333

Please Note: Individual companies shown or discussed in this presentation have been used as examples only and are not intended as recommendations of any kind by Anava Capital Management LLC or any of its representatives.



# SOME INTERESTING CHARTS

GREED



#### RATIONALITY



These charts came from the last few weeks. Greed and panic are from two successive days! Rational was a couple of weeks earlier. (From Google Finance)

#### ANAVA Capital Management LLC

## **CAUSES OF RISK**

- INEVITABLE UNCERTAINTY IN PREDICTIONS OF THE FUTURE
- LACK OF ENOUGH INFORMATION TO PRODUCE ACCURATE PREDICTIONS
- INABILITY TO PROPERLY UNDERSTAND AND USE AVAILABLE INFORMATION
- INABILITY TO TAKE THE CORRECT ACTION EVEN IF IT IS KNOWN
  - PSYCHOLOGICAL FACTORS
  - REGULATORY FACTORS
  - INSUFFICIANT OR TOO MUCH CASH
  - OTHER PERSONAL FACTORS



# **TYPES OF INFORMATION**

# QUALITATIVE

- NEWS
- PERSONAL EXPERIENCE
- ADVICE FROM OTHERS

# QUANTITATIVE

- FUNDAMENTALS
- PRICE & VOLUME DATA

November 4, New York L Closed	London Tokyo Closed Closed	9:41 PM EST	9,802 +	g Kong st in's Topix in's Nikke RECT: H +30.15 -0.31%	index falls i 225 end: ong Kong NASDAQ 2,056	s 0.7% in s mornin H share: -1.80 -0.09%
Front Page		Commentary		Investi	1978 - Casta	sonal Fin:
U.S. and Ca	anada · Europe and	d Middle East • /	Asia · Emergi	ng Markets	s • Latin Au	merica ·
March 31	, 2009, <mark>9:</mark> 53 p.m. I	EDT · Recomm	nend (1) - P	ost 📑 🚺	3	
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istorical Chart of GE ste 7/20/09 Open 11.71 High 11.93	Low 11.58 Close	ne 11/04/08 to 11/04/09				
E 🗕 Splits 😌 Dividends 🛄 Earnings Up 🕰 Earn	nings Down 🔻	22				
Wat have have her have	SO 20 Normal March					
Dec D0 Feb Mar Apr	\$0.26	so 22 18 10 14 14 12	ormation			
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	\$0.26	so 22 16 10 14 12 10 8	ormation		08	3/28/2009
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Dec DO Feb Mar Apr Dec DO Feb Mar Apr	4444 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Financial Inf	ormation	\$M \$M	08	
Dec DO Feb Mar Apr Dec DO Feb Mar Apr	Sales	Financial Inf	ormation		08	290.5
Dec 00 Feb Mar Apr Dec 00 Feb Mar Apr	Sales Cost of Goo Gross Income	Financial Inf		\$M	30	290.5 123.9
Dec 00 Fab Mar Apr Dec 00 Fab Mar Apr Dec 00 Fab Mar Apr Dec 00 Fab Mar Apr Actor(2,28) = MACD EMA(9) = Divergence (	Sales Cost of Goo Gross Income Depreciatio	Financial Inf		\$M \$M	30	290.5 123.9 166.6

©BigCharts.com

# WE'LL COVER BOTH, BUT STRONGLY EMPHASIZE QUANTITATIVE ANALYSIS

Figures from: www.marketwatch.com, www.bigcharts.marketwatch.com, and AAII's Stock Investor Pro

### USING QUALITATIVE BUY & SELL CRITERIA FOR PROTECTION

- **BUSINESS CHANGES** 
  - LOSING A CONTRACT
  - CHANGE OF MANAGEMENT
  - REGULATORY CHANGES
  - **ETC**

ANAVA

#### • ECONOMIC AND POLITICAL CHANGES

- LAWS
- POLITICAL GOALS
- MONETARY SYSTEM FLUCTUATIONS
- **ETC**

#### • MARKET PSYCHOLOGY CHANGES

- IN SOME MARKETS \*EVERYTHING\* GOES UP OR DOWN
- SOMETIMES MARKET MOVES CAN BE PREDICTED FAIRLY WELL, AND SOMETIMES THEY CAN'T
- IT CAN BE PSYCHOLOGICALLY HARD TO ACT RATIONALLY, OR TO ACT AT ALL

### USING QUANTITATIVE BUY & SELL CRITERIA FOR PROTECTION

- STOP-LOSS ORDERS TO LIMIT LOSSES
  - SELL AT OR BELOW A FIXED PRICE (FIXED STOP)
  - SELL AT OR BELOW A PERCENTAGE BELOW THE MOST RECENT HIGH (TRAILING STOP)
- LIMIT ORDERS TO BUY LOW OR SELL HIGH
  - BUY AT OR BELOW OR SELL AT OR ABOVE
- YOU CAN MAKE THE TRADES
  - TAKES TIME
- YOUR BROKER CAN MAKE THE TRADES
  - YOU LOSE CONTROL (CAN BE GOOD OR BAD)
- OPTIONS

- USED FOR PROTECTION, THESE ARE EQUIVALENT TO BUYING INSURANCE
- DON'T OVERPAY

# FINDING THE BEST STRATEGY

- ANALYSIS OF PAST HISTORY
  - It's no guarantee of success, but it's the only thing we have on which to base a prediction.
  - Quantitative analysis using spreadsheets is an easy and effective way to find a reasonable strategy.
  - Quantitative methods should be supplemented with a qualitative answer to the question "Is it reasonable to believe that what worked in the past will work now?"
- BACK TESTING

- Should be done in periods similar to the present
- Should be done in periods similar to what might appear in the near future
- Recent data is usually more important than old data

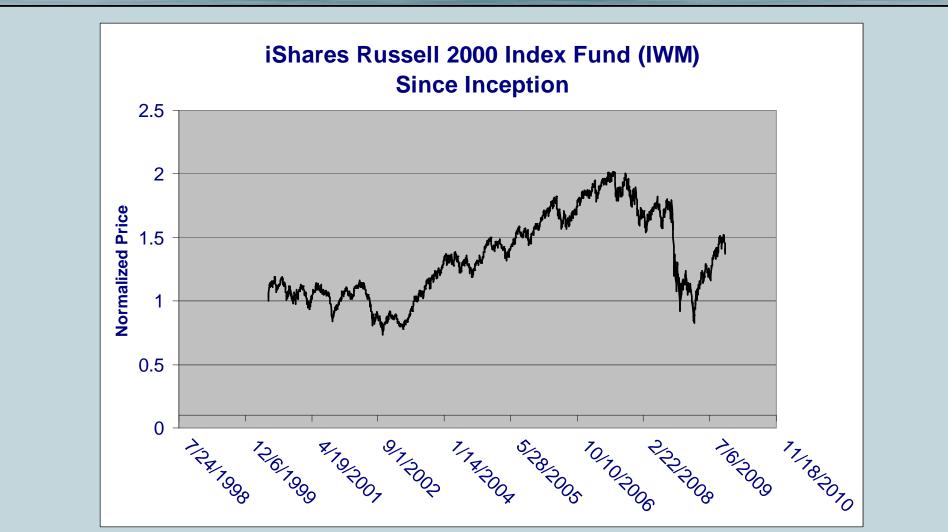
## **GENERAL PRINCIPLES**

- USE A TWO LEVEL SYSTEM TO BUY AND SELL
  - Level 1: An alert based on price movements that warns you that something has happened that is out of the ordinary. You should investigate and buy or sell based on qualitative reasons.
  - Level 2: A buy or sell signal based on price movements that should be acted on first and analyzed later.
- BACKTESTING

- Never just optimize returns and accept the results
- Look at optimized returns in various kinds of markets
- Look at how sensitive returns are to the precise values of the optimized parameters (e.g. - the trailing stop percentage)



## A REAL EXAMPLE



Up 37% in 9.4 Years as of 10/30/09, or 3.4% per year. A 10-year T-Bond paid 6.33%/yr or 60% total, no reinvesting. Can we do better?

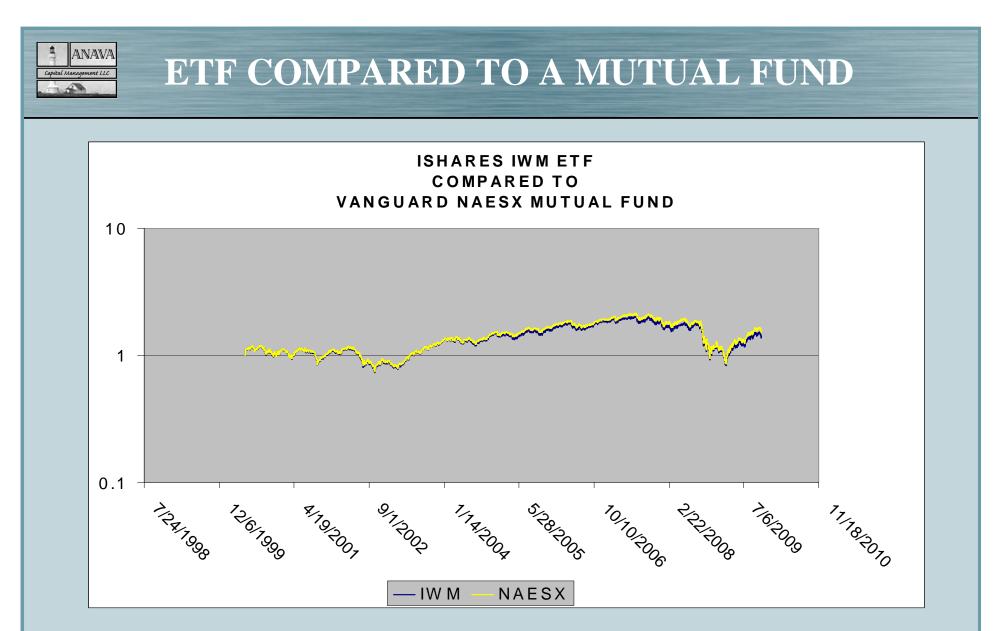
IShares Wilshire 2000 ETF – A small-cap ETF that represents the 2000 smallest capitalization stocks in the Russell 3000 index.

**Steps:** 

- Do a historical analysis to determine which past fluctuations are the result of normal, random variations from the general trend
- Check past returns and volatility of IWM shares over time periods that cover recent up, down and sideways markets.
- Decide how much time you have to monitor your investment. Set your monitoring interval accordingly. Use a trailing stop. If you have time use an alert too.
- Set alert and stop to trigger only on significant down-turns

### **VISUAL COMARISON OF IWM TO** ANAVA **OTHER HIGH-VOLUME INDEX ETFS** ETF Comparison 10 DIA 1 SPY 0000 0.1 101701200K 77/18/2010 1,14,200

IWM (small cap stocks) has outperformed the other index funds and is more volatile. It is thus an ideal candidate for quantitative buy and sell methods. The equally volatile NASDAQ (QQQQ) might be a reasonable alternative, but has slightly underperformed IWM.



The Vanguard fund slightly outperforms the iShares exchange traded fund, probably because of lower fees, but trading the mutual fund is severely restricted by Vanguard.





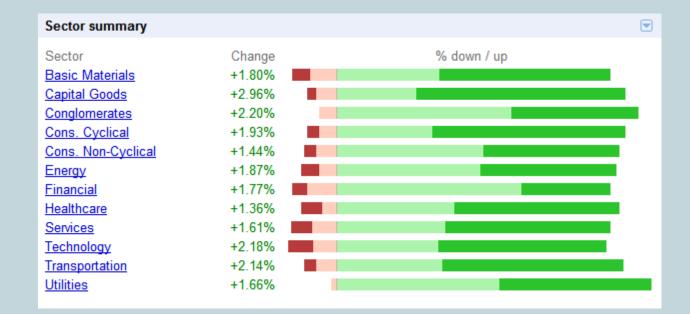
#### Market summary

Unemployment hits 10.2% CNNMoney.com - 31 minutes ago The unemployment rate spiked to its highest level since 1983, much worse than expected as employers continue to trim jobs despite other signs of growth. Jobless Rate Hits 10.2%, a 26-Year High New	— Dow —	— S&P 500 -	— Nasdaq	
York Times <u>CORRECTED - US Oct payrolls fall 190000,</u> jobless rate 10.2 pct Reuters <u>Wall Street Journal</u> <u>MarketWatch Related articles »</u>	<u>Dow</u> <u>S&amp;P 500</u> <u>Nasdaq</u>	10,005.96 1,066.63 2,105.32	+203.82 0.00	-0.25% (2.08%) (0.00%)
Top stories Market Portfolio related				
AIG profitable for second straight quarter CNNMo Edison Intl 3rd-Quarter Profit Slides 8.2% On Energy Wall Street Journal - 22 minutes ago - Related artice Job market report disappoints Wall Street CNNM	<u>gy Pri</u> :les »		-	

From http://www.google.com/finance on Friday, Nov. 6, 2009 at 9:25 EST



#### **MARKET NEWS THE DAY BEFORE**



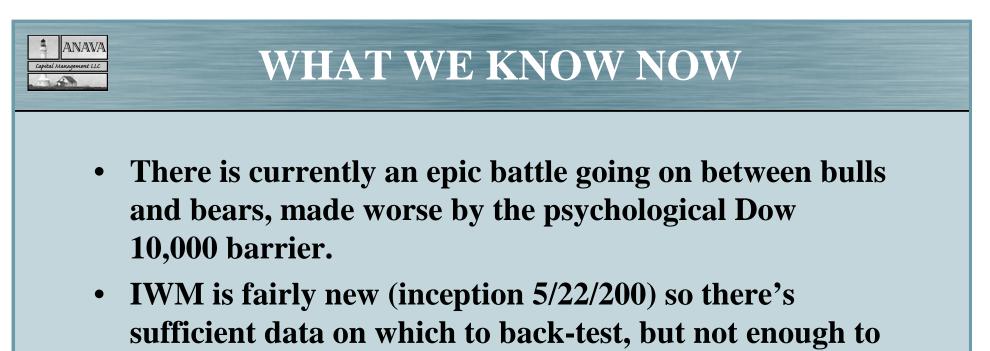
#### GREED – THIS IS WHAT THE MARKET DID THE DAY BEFORE THE NEWS ON THE PREVIOUS SLIDE. TODAY (FRIDAY NOV. 6) IS RATIONAL AT NOON EST. LET'S SEE WHAT HAPPENS MONDAY!

From <a href="http://www.google.com/finance">http://www.google.com/finance</a> for November 5, 2009 after the close



# **IWM ETF INFORMATION**

Sector Breakdown as of 1	11/5/2009	View all hold	Average An quarterly, as		tal Return	s (NAV)	Vie	ew all performant
· Financial Services	20.85%			1 Year	3 Years	5 Years	10 Years	Since Inceptio
· Technology	16.26%		IWM	-9.38%	-4.49%	2.41%		3.90
Consumer Discretionary	15.16%		Index 🛈	-9.55%	-4.57%	2.41%	4.88%	4.04
Health Care	14.12%		Top Daily	Holdings*				View all holdi
Producer Durables	13.31%		as of 11/5/2					
Materials & Processing	7.31%		HUMAN GENO	DME SCIENCES	5 INC			0.5
Energy	4.67%		BGIF TREAS	JRY MONEY M	ARKET SL AG	SENCY SHAR	ES	0.3
Utilities	4.46%		TUPPERWAR	E BRANDS CO	RP			0.3
Consumer Staples	3.03%		SOLERA HOL	DINGS INC				0.2
Autos & Transportation	0.48%			NOLOGIES INC				0.2
Other/Undefined	0.34%			ANCIAL CORI	P			0.2
Total Net Assets	\$10,863,433,371		3COM CORP	•				0.2
Expense Ratio	0.24%		J CREW GRO	OUP INC				0.2
Shares	186,750,000		MFA Financia					0.2
Outstanding			HIGHWOOD	S PROPERTIE:	5 INC			0.2
Total Holdings	2011		Total					2.9
Inception Date	5/22/2000	From http://us	ichoroc	om/nro	duct in	fo/fund	ovorviou	/TXX/N/ 64-
Related Index	RU20INTR	riom nup.//u	5.1511a1 CS.(	our hiod	uuci_m	ulu/iuliu/	Uver view	



- cover things like stagflation.
- It's heavily concentrated in particularly hard-hit sectors like financials and consumer durables therefore this is a recovery bet.
- The fund is large and therefore liquid.

#### SPREADSHEET ANALYSIS PROGRAM

- THE FOLLOWING ANALYSIS WAS DONE WITH A NEW OPEN-SOURCE EXCEL PROGRAM THAT WIL BE POSTED BY TOMORROW EVENING ON THE CHAPTER WEBSITE AFTER THIS SEMINAR.
- THE WEBSITE IS <u>www.siliconvalleyaaii.org</u>. GO TO THE PRESENTATIONS PAGE AND LOOK IN "DOWNLOADS" UNDER THE ANNOUNCEMENT FOR THIS SEMINAR.
- THIS IS A PRELIMINARY VERSION OF THE PROGRAM WITH A VERY PRELIMINARY MANUAL. IT WILL BE UPDATED IN THE NEAR FUTURE.



## WHAT IT DOES

- Downloads historical data from Yahoo Finance.
- Finds optimum settings for several popular buy/sell methods.
- Back-tests the same buy/sell methods using userspecified settings.
- Displays data for both optimum and user-specified settings to help evaluate both the performance achieved and how sensitive that performance is to changes in market conditions and settings used.
- The program is open source and free of charge. It is entirely without warranty (see the accompanying Gnu General Public License), and is intended solely as an example of how spreadsheets can be used as an investment analysis tool.



## THE INPUT WORKSHEET

Ticker IWM QQQQ SPY DIA	Sector ETF ETF ETF ETF	Messages	Sample Period (d, w, or m) From Date (m/d/yr) To Date (m/d/yr) DOWNLOAD DATA OPTIMIZE BACKTEST	d 5/26/2000 10/30/2009	Sample Period Day (d), Week (w), or Month (m) d From Date (m/d/yr) 5/26/2000 To Date (m/d/yr) 10/30/2009
			Copyrigh	License, version 2, as publish be that it will be useful, but Wi pilied warranty of A PARTICULAR PURPOSE. details. he GNU General Public Licens Free Software Foundation, Inc	ed by THOUT See the se along

The gray areas are for inputs. Other areas are protected without a password. Don't change them lightly. The green buttons will: 1. Download data from Yahoo Finance Historical Data, 2. Find optimum parameters for your choice of several Buy/Sell methods, and 3. Back-test a specified set of parameters.



# **INPUT DIALOG BOXES**

Opti	mization Metho	ds		×					
		Buy Method							
	Buy if X% Change (High, Low, Inc) in N Periods								
	10.0	-10.0	1.0	1					
	High	Low	Increment						
	5	0	0						
	In N Periods	Fixed Value 2	Fixed Value 3						
	T T	Sell Method							
	Trailing Stop (% Fixed Price Sto Protect Profits	p (%)							
	20.0	0.0	1.0						
	High	Low	Increment						
	0	0	0	1					
	Fixed Value 1	Fixed Value 2	Fixed Value 3						
	Cancel		Enter						

Selects methods and setting ranges over which to optimize.

Sele sett

Input Source	×
Enter Source	OK Cancel
	Backtest
Selects sheet with data to analyze.	Buy Method Buy if X% Change in N Periods
Destination Worksheet Enter Destination Worksheet	5.0       % Change       5     0       In N Periods     Fixed Value 2   Fixed Value 3
Data	Sell Method Trailing Stop (%) Fixed Price Stop (%) Protect Profits (%)
Selects sheet to which data is downloaded.	5.0       % Change       0     0       Fixed Value 1     Fixed Value 2       Fixed Value 3
elects methods and specific ttings to analyze.	Cancel



### THE OPTIMIZER RESULTS WORKSHEET

TS 5 day % Change 5/26/00 10/30/09 day	
13 5 day % change 5/20/00 10/30/09 day	
Ticker IWM QQQQ SPY DIA	
Std Dev in Period         1.675%         2.087%         1.405%         1.333%	
Mean Return 0.027% -0.004% 0.004% 0.014%	
Buy & Hold Return 37.156% -45.885% -12.155% 13.613%	
Max Buy & Hold Draw Down         -58.860%         -80.450%         -55.189%         -52.322%	
Max Draw Down Date         03/09/09         10/09/02         03/09/09         03/09/09	
Opt Sell         17.000%         1.000%         9.000%         9.000%	
<b>Opt Buy</b> -9.000% -8.000% 8.000% 7.000%	
Opt Return         170.518%         105.687%         105.678%         97.478%	
Opt Drawdown         -29.225%         -23.051%         -24.654%	
Total Trades with Opt Strategy         14         90         12         14	
Winning Sales         4         26         2         3	
Losing Sales 3 19 4 4	
Transaction Dates and Types IWM QQQQ SPY	
09/17/01 B 07/27/00 B 07/29/02 B	
07/02/02 SW 07/31/00 SL 09/17/02 SL	
07/23/02 B 08/02/00 B 10/15/02 B	
10/07/02 SL 08/09/00 SW 01/27/03 SL	
10/09/02 B 09/11/00 B 03/18/03 B	
01/08/08 SW 09/15/00 SL 08/15/07 SW	
09/29/08 B 10/11/00 B 10/31/08 B	
10/14/08 SL 10/17/00 SW 11/06/08 SL	
10/24/08 B 10/30/00 B 11/26/08 B	

11/18/08 SL

02/18/09 SW

10/30/09 SW

11/19/08 B

02/23/09 B

DIA 04/10/01 B 07/06/01 SW 07/29/02 B 09/17/02 SL 10/15/02 B 01/27/03 SL 03/17/03 B 11/21/07 SW

10/31/08 B

11/06/08 SL

11/26/08 B

01/14/09 SL

03/12/09 B

10/30/09 SW

01/14/09 SL

10/30/09 SW

03/12/09 B

This contains a list of statistics for each input ticker, allowing performance comparisons between tickers and between optimized and buy-and-hold results.

11/07/00 SW

11/16/00 SW

11/10/00 B

11/21/00 B

11/27/00 SL

11/29/00 B

# THE OPTIMIZER TABLES WORKSHEET – FIRST HALF



				BUY	VALUES																		
	IWM	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
	0	5.805279	-2.54929	-4.40918	-2.68594	-4.36586	20.4662	-10.7829	53.64385	34.30514	52.56743	61.56962	-33.475	-53.3921	-59.2021	-45.6928	-38.5742	-39.3809	-35.7012	-24.2221	-19.8096	-17.829	-17.829
SELL	-0.01	10.22909	1.525207	-7.54076	3.273731	11.8023	26.46739	2.513346	38.52354	28.9914	-5.53436	-3.20127	-48.516	-64.342	-66.8291	-53.9528	-51.496	-38.7092	-32.6561	-17.3097	-20.6037	-18.8606	-18.8606
VALUES	-0.02	8.612108	-5.09414	-14.7858		7.953493	10.69151				36.39476		-37.8286		-59.9889	-42.5678	-44.8819		-35.5607	-24.2058	-26.1914	-22.7983	-22.7983
	-0.03	-6.00811				17.82811		-49.2476			43.59266			-59.5429	-55.5253	-49.071	-48.0811	-48.1463	-46.7869	-33.7768	-32.6221	-27.1602	-27.1602
	-0.04	-6.63376		-1.13763	-10.3586		29.41396					49.70131		-36.212	-31.4193	-27.1855	-31.0476		-38.1442	-35.8317	-36.1242	-29.7772	-29.7772
	-0.05	-6.95274			-8.61327	11.27865			42.36181	15.7895				-5.64977			3.731499	1.008559	-30.7794	-26.1956	-29.9304	-22.968	-22.968
	-0.06	-10.5653		-13.2723	-12.2747	-6.39446	3.000679	-0.84519		26.06391			13.72255		3.232555		2.678632	12.55306	-26.2141	-26.108	-26.8695	-22.9602	-22.9602
	-0.07	3.350826				-18.8501	19.46705	-16.7021	-15.7634	17.0091			51.97946		20.20241		14.6236	17.18331	-27.5027	-23.3945	-20.0838	-15.1218	-15.1218
	-0.08 -0.09		26.09074	22.93541 21.09436		-36.0849 -45.7541	-5.7273	-33.4885 -48.3096		24.28924	17.78047	32.39736	49.808 27.96337		22.17693	7.712504	4.764582	10.69817	-26.1711 -35.6708	-17.2012 -26.102	-13.6229 -20.8449	-13.6229 -20.8449	-13.6229 -20.8449
	-0.09	-2.9176				-45.7541 -34.1556	6.150656		16.03149			27.31577	58.71944		35.09561	7.617617		7.893611	-35.6706	-26.102	-20.0449	-20.8449	-20.8449
		-4.88295	-15.3739			-34.1556	4.867262	-20.578				28.5764		11.3407		-15,7994	-10.9766	-8.22655	-39,8394	-10.7375	-14.3824	-14.3824	-14.3824
	-0.12			32.04982	12,5336	-3.81383	15.26092		4.469319			18 72279	33,53908		30.57231	12,49087	-19.1938	-0.49388	-38,5269	-18.352	-11.8604	-11.8604	-11.8604
	-0.12	-13.1344	-9.3515	28.04891	8.032415	-8.6348	-16.5216	-34,4702				18,10606	35.50004	17.26243	15.75072	5.597788	-17.9631	-15.1887	-45.023	-23,1605	-17.0512	-17.0512	-17.0512
	-0.14	-16.0675			-30.9641	-13.8039	-3.71369		-26.9955	-6.96693					20.72527	16,70312	-11.1107	-18.0873	-45,9974	-27.3891	-19.8109	-19,8109	-19.8109
	-0.15	-18.5947	-17.1494	-35.1225	-30.609	4.39887	1.645495		-23.1834		-0.41827	9.198421	26.66225	19.08417	12.52211	12.52211	-3.12398	18.0279	-48.5989	-28.1073	-20.604	-20.604	-20.604
	-0.16	-21.552			51.76059	43.17435	19.70034		4.854194		9.595071	16.77163	47.96421	36.80668	29.58378	25.54534	19.83334	18.28932	21.70711	-33.4874	-25.5092	-25.5092	-25.5092
	-0.17	26.12571	170.5175	131.9397	103.109	31.68764	34.01397	-7.71893	1.56357	18.2076	9.595071	16.77163	39.09687	28.608	21.81796	18.02154	12.65185	11.20036	14.41333	-39.6043	-28.9853	-28.9853	-28.9853
	-0.18	8.968825	109.121	67.55486	49.43529	-35.6235	28.61914	-11.3077	3.745308	14.37141	7.985518	16.77163	35.17097	23.0895	16.59082	16.59082	12.70812	11.2559	7.291841	-48.8051	-38.859	-38.859	-38.859
	-0.19	5.37624	86.58921	52.54076	49.1467	0.775915	26.65966	-9.94491	-1.78896	15.8225	10.04336	23.69627	32,1691	24.26155	17.41419	17.41419	17.12402	15.61491	22.8307	-41.3907	-30.0041	-30.0041	-30.0041
	-0.2	8.296938	83.32406	51.05245	47.6915	-1.19438	29.14454	-29.3835	-6.68935	10.04336	10.04336	20.57554	21.6368	14.35938	8.057678	8.057678	7.790636	6.401782	15.79163	-44.205	-33.3652	-33.3652	-33.3652
					VALUES																		_
	0000	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
	0	57.49617	-0.09 77.59932	-0.08 104.0069	-0.07 74.08703	77.73156	105.3063	30.93488	47.14156	23.50406	63.97073	2.855554	-59.7151	-44.481	-35.4389	-37.8453	-16.282	-18.6495	-34.0173	-30.1975	-17.8196	-18.7098	-7.96491
SELL	0 -0.01	57.49617 45.65905	-0.09 77.59932 56.50146	-0.08 104.0069 105.6868	-0.07 74.08703 96.74545	77.73156 49.777	105.3063 61.69244	30.93488 35.79433	47.14156 34.24987	23.50406 8.024958	63.97073 54.40681	2.855554 -3.73017	-59.7151 -63.6186	-44.481 -53.7977	-35.4389 -49.2627	-37.8453 -40.9628	-16.282 -24.701	-18.6495 -34.5842	-34.0173 -50.1273	-30.1975 -43.0303	-17.8196 -30.8797	-18.7098 -31.2349	-7.96491 -22.7647
SELL VALUES	0 -0.01 -0.02	57.49617 45.65905 12.65366	-0.09 77.59932 56.50146 16.47531	-0.08 104.0069 105.6868 34.639	-0.07 74.08703 96.74545 2.291954	77.73156 49.777 -22.0541	105.3063 61.69244 -18.8522	30.93488 35.79433 -32.367	47.14156 34.24987 -26.6206	23.50406 8.024958 -25.3818	63.97073 54.40681 8.79307	2.855554 -3.73017 -1.00802	-59.7151 -63.6186 -71.6601	-44.481 -53.7977 -56.4333	-35.4389 -49.2627 -58.3358	-37.8453 -40.9628 -54.0633	-16.282 -24.701 -26.716	-18.6495 -34.5842 -30.032	-34.0173 -50.1273 -47.5587	-30.1975 -43.0303 -43.1139	-17.8196 -30.8797 -25.3614	-18.7098 -31.2349 -29.232	-7.96491 -22.7647 -22.8796
	0 -0.01 -0.02 -0.03	57.49617 45.65905 12.65366 10.88882	-0.09 77.59932 56.50146 16.47531 -1.18898	-0.08 104.0069 105.6868 34.639 3.894747	-0.07 74.08703 96.74545 2.291954 -31.1784	77.73156 49.777 -22.0541 -34.2547	105.3063 61.69244 -18.8522 -27.7138	30.93488 35.79433 -32.367 -28.6994	47.14156 34.24987 -26.6206 -34.2491	23.50406 8.024958 -25.3818 -37.6554	63.97073 54.40681 8.79307 -23.0453	2.855554 -3.73017 -1.00802 -26.9903	-59.7151 -63.6186 -71.6601 -61.6397	-44.481 -53.7977 -56.4333 -47.6703	-35.4389 -49.2627 -58.3358 -41.9475	-37.8453 -40.9628 -54.0633 -56.8535	-16.282 -24.701 -26.716 -30.0352	-18.6495 -34.5842 -30.032 -36.2689	-34.0173 -50.1273 -47.5587 -52.6754	-30.1975 -43.0303 -43.1139 -44.6632	-17.8196 -30.8797 -25.3614 -22.9152	-18.7098 -31.2349 -29.232 -26.9128	-7.96491 -22.7647 -22.8796 -23.1499
	0 -0.01 -0.02 -0.03 -0.04	57.49617 45.65905 12.65366 10.88882 27.7352	-0.09 77.59932 56.50146 16.47531 -1.18898 15.33168	-0.08 104.0069 105.6868 34.639 3.894747 8.076917	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631	77.73156 49.777 -22.0541 -34.2547 -17.5181	105.3063 61.69244 -18.8522 -27.7138 -13.083	30.93488 35.79433 -32.367 -28.6994 -2.82273	47.14156 34.24987 -26.6206 -34.2491 -25.6703	23.50406 8.024958 -25.3818 -37.6554 -45.8937	63.97073 54.40681 8.79307 -23.0453 -33.0574	2.855554 -3.73017 -1.00802 -26.9903 -30.3529	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564	-44.481 -53.7977 -56.4333 -47.6703 -49.9002	-35.4389 -49.2627 -58.3358 -41.9475 -40.6338	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546	-16.282 -24.701 -26.716 -30.0352 -34.2398	-18.6495 -34.5842 -30.032 -36.2689 -37.9746	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943	-17.8196 -30.8797 -25.3614 -22.9152 -13.279	-18.7098 -31.2349 -29.232 -26.9128 -27.8235	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075
	0 -0.01 -0.02 -0.03 -0.04 -0.05	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309	-0.09 77.59932 56.50146 16.47531 -1.18898 15.33168 -10.2168	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217	23.50406 8.024958 -25.3818 -37.6554 -45.8937 -11.16	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614	2.855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318	-35.4389 -49.2627 -58.3358 -41.9475 -40.6338 -38.8875	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204	-17.8196 -30.8797 -25.3614 -22.9152 -13.279 -30.2066	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647	-0.09 77.59932 56.50146 16.47531 -1.18898 15.33168 -10.2168 -14.0323	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779 -32.9175	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6999	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -25.5761	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495	23.50406 8.024958 -25.3818 -37.6554 -45.8937 -11.16 -15.1591	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582	2.855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054	-35.4389 -49.2627 -58.3358 -41.9475 -40.6338 -38.8875 -45.7104	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3756	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473	-17.8196 -30.8797 -25.3614 -22.9152 -13.279 -30.2066 -30.5747	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.07	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581	-0.09 77.59932 56.50146 16.47531 -1.18898 15.33168 -10.2168 -14.0323 -31.2606	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1591	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6999 -49.6357	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -25.5761 -35.3255	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868 -57.7053	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534	23.50406 8.024958 -25.3818 -37.6554 -45.8937 -11.16 -15.1591 -43.3292	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779	2.855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342 -60.4754	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431	-35.4389 -49.2627 -58.3358 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3756 -63.294	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138 -53.127	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227	-17.8196 -30.8797 -25.3614 -22.9152 -13.279 -30.2066 -30.5747 -21.6498	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647	-0.09 77.59932 56.50146 16.47531 -1.18898 15.33168 -10.2168 -14.0323 -31.2606 -39.0785	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1591	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6999	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -25.5761	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534 -39.0442	23.50406 8.024958 -25.3818 -37.6554 -45.8937 -11.16 -15.1591 -43.3292 -38.9781	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779 -19.4652	2.855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342 -60.4754 -63.4319	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285	-35.4389 -49.2627 -58.3368 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3756	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054 -41.9021	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473	-17.8196 -30.8797 -25.3614 -22.9152 -13.279 -30.2066 -30.5747	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.06 -0.07 -0.08 -0.09	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581 -20.9695	-0.09 77.59932 56.50146 16.47531 -1.18898 15.33168 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1591 -53.0847	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6999 -49.6367 -55.11	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -25.5761 -35.3255 -40.4536 -70.8706	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413 -39.5271	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534 -39.0442 -25.2188	23.50406 8.024958 -25.3818 -37.6554 -45.8937 -11.16 -15.1591 -43.3292 -38.9781 -21.4956	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779 -19.4652	2.855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509 -15.8379	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342 -60.4754 -63.4319 -73.8214	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285	-35.4389 -49.2627 -58.3358 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102 -68.7529	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3756 -63.294 -60.7286 -68.0014	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783 -36.7538	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138 -53.127 -39.0674	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158	-17.8196 -30.8797 -25.3614 -22.9152 -13.279 -30.2066 -30.5747 -21.6498 8.79686	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549 -22.9669	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.06 -0.07 -0.08 -0.09	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581 -20.9695 -31.9688	-0.09 77.59932 56.50146 16.47531 -1.18898 15.33168 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305 -52.9097	-0.08 104.0069 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1591 -53.0847 -56.5669 -50.0941	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6999 -49.6367 -55.11 -54.803	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -25.5761 -35.3255 -40.4536 -70.8706	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373 -58.6699 -45.9589	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413 -39.5271 -4.45285 2.031244	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534 -39.0442 -25.2188 -28.3438	23,50406 8,024958 -25,3818 -37,6554 -45,8937 -11,16 -15,1591 -43,3292 -38,9781 -21,4956 -17,2744	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779 -19.4652 -17.0484	2.855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509 -15.8379 -16.6343	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342 -60.4754 -63.4319 -73.8214	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285 -70.1045	-35.4389 -49.2627 -58.3358 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102 -68.7529	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3756 -63.294 -60.7286 -68.0014	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054 -41.9021 -53.3691	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783 -36.7538 -41.5078	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138 -53.127 -39.0674 -40.9542	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158 -7.26525	-17.8196 -30.8797 -25.3614 -22.9152 -13.279 -30.2066 -30.5747 -21.6498 8.79686 14.23968	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549 -22.9669 -27.5749	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868 -26.3714
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.07 -0.08 -0.09 -0.09 -0.1	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581 -20.9695 -31.9688 -14.6602 -23.4229	-0.09 77.59932 56.50146 16.47531 -1.18898 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305 -52.9097 -41.4343	-0.08 104.0069 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1591 -53.0847 -56.5669 -50.0941	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6999 -49.6357 -55.11 -54.803 -31.6992	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -25.5761 -35.3255 -40.4536 -70.8706 -71.8861	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373 -58.6699 -45.9589 -62.1732	30,93488 35,79433 -32,367 -28,6994 -2,82273 -23,864 -7,8272 -27,1413 -39,5271 -4,45285 2,031244 -40,3749	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534 -39.0442 -25.2188 -28.3438	23.50406 8.024958 -25.3818 -37.6554 -45.8937 -11.16 -15.1591 -43.3292 -38.9781 -21.4956 -17.2744 -11.3991	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779 -19.4652 -17.0484 -32.7834 -30.5866	2 855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509 -15.8379 -16.6343 -28.7557	-59,7151 -63,6186 -71,6601 -61,6397 -52,4564 -61,296 -59,1342 -60,4754 -63,4319 -73,8214 -70,4193 -75,227	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285 -70.1045 -71.6147	-35.4389 -49.2627 -58.3358 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102 -68.7529 -66.5511	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3756 -63.294 -60.7286 -68.0014 -67.4925	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054 -41.9021 -53.3691 -51.1453	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783 -36.7538 -41.5078 -36.3759	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138 -53.127 -39.0674 -40.9542 -44.5358	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158 -7.26525 -5.1203	-17.8196 -30.8797 -25.3614 -22.9152 -13.279 -30.2066 -30.5747 -21.6498 8.79686 14.23968 27.26398	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549 -22.9669 -27.5749 -19.3179	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868 -26.3714 -17.9771
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.07 -0.08 -0.09 -0.1 -0.11	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581 -20.9695 -31.9688 -14.6602 -23.4229	-0.09 77.59932 56.50146 16.47531 -1.18898 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305 -52.9097 -41.4343	-0.08 104.0069 105.6868 34.639 3.894747 8.0768779 -32.9175 -47.1591 -53.0847 -55.6669 -50.0941 -36.6698 -33.2519	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6999 -49.6357 -55.11 -54.803 -31.6992 5.290934	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -35.3255 -40.4536 -70.8706 -71.8861 -44.2735	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373 -58.6699 -45.9589 -62.1732	30,93488 35,79433 -32,367 -28,6994 -2,82273 -23,864 -7,8272 -27,1413 -39,5271 -4,45285 2,031244 -40,3749	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2634 -39.0442 -25.2188 -28.3438 -38.0717	23.50406 8.024958 -25.3818 -37.6554 -45.8937 -11.16 -15.1591 -43.3292 -38.9781 -21.4956 -17.2744 -11.3991	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779 -19.4652 -17.0484 -32.7834 -30.5866 -35.5294	2 855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509 -15.8379 -16.6343 -28.7557	-59,7151 -63,6186 -71,6601 -61,6397 -52,4564 -61,296 -59,1342 -60,4754 -63,4319 -73,8214 -70,4193 -75,227 -73,5244	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285 -70.1045 -71.6147 -77.2529	-35.4389 -49.2627 -58.3358 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102 -68.7529 -66.5511 -74.8276	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3756 -63.294 -60.7286 -68.0014 -67.4925 -75.5361	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054 -48.5054 -41.9021 -53.3691 -51.1453 -59.0093	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783 -36.7538 -41.5078 -36.3759 -43.98	-34.0173 -50.1273 -47.5587 -52.6754 -54.6585 -59.2596 -52.8138 -53.127 -39.0674 -40.9542 -44.5358 -49.1499	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158 -7.26525 -5.1203 -21.0902	-17.8196 -30.8797 -25.3614 -22.9152 -30.2066 -30.5747 -21.6498 8.79686 14.23968 27.26398 7.44067	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549 -22.9669 -27.5749 -19.3179 -31.8853	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868 -26.3714 -17.9771 -30.7534
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.07 -0.08 -0.09 -0.19 -0.11 -0.11	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581 -20.9695 -31.9688 -14.6602 -23.4229 -16.7364	-0.09 77.59932 56.50146 16.47531 -1.18898 -10.2168 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305 -52.9097 -41.4343 -37.8421 -46.46	-0.08 104.0069 105.6868 34.639 3.894747 8.0768779 -32.9175 -47.1591 -53.0847 -55.6669 -50.0941 -36.6698 -33.2519	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0831 -55.842 -47.6999 -49.6357 -55.11 -54.803 -31.6992 5.290934 7.097221	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -35.3255 -40.4536 -70.8706 -71.8861 -44.2735 -39.1413	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373 -58.6699 -45.9589 -62.1732 -60.4913	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413 -39.5271 -4.45285 2.031244 -40.3749 -49.6157	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534 -39.0442 -25.2188 -28.3438 -38.0717 -36.4943	23,50406 8,024958 -25,3818 -37,6554 -45,8937 -11,16 -15,1591 -43,3292 -38,9781 -21,4956 -17,2744 -11,3991 -25,5882 -27,202	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779 -19.4652 -17.0484 -32.7834 -30.5866 -35.5294 -33.5237	2.855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509 -15.8379 -16.6343 -28.7557 -37.9004 -42.3855	-59,7151 -63,6186 -71,6601 -61,6397 -52,4564 -61,296 -59,1342 -60,4754 -63,4319 -73,8214 -70,4193 -75,227 -73,5244	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285 -70.1045 -71.6147 -77.2529 -71.9289	-35.4389 -49.2627 -58.3368 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102 -68.7529 -66.5511 -74.8276 -69.8304	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3756 -63.294 -60.7286 -68.0114 -67.4925 -75.5361 -70.8729 -68.8496	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054 -41.9021 -53.3691 -51.1453 -59.0093 -47.8124	-18,6495 -34,5842 -30,032 -36,2689 -37,9746 -48,0784 -43,9369 -50,783 -36,7538 -41,5078 -36,3759 -43,98 -39,6578	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138 -53.127 -39.0674 -40.9542 -44.5358 -49.1499 -42.2483	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158 -7.26525 -5.1203 -21.0902 -22.0042	-17.8196 -30.8797 -25.3614 -22.9152 -30.2066 -30.5747 -21.6498 8.79686 14.23968 27.26398 7.44067 -0.56494	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549 -22.9669 -27.5749 -19.3179 -31.8853 -36.9607	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868 -26.3714 -17.9771 -30.7534 -35.9131
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.07 -0.08 -0.09 -0.19 -0.11 -0.11 -0.12 -0.13	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581 -20.9695 -31.9688 -14.6602 -23.4229 -16.7364 -41.5861	-0.09 77.59932 56.50146 16.47531 -1.18898 10.2168 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305 -57.4305 -52.9097 -41.4343 -37.8421 -46.46 -52.0679	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1591 -53.0847 -56.5669 -50.0941 -36.6698 -33.2519 -53.6725 -58.5058	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0831 -55.842 -47.6999 -49.6357 -55.11 -54.803 -31.6392 5.290934 7.097221 -36.1937	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -35.3256 -40.4536 -70.8706 -71.8861 -44.2735 -39.1413 -56.6457	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373 -58.6699 -45.9689 -62.1732 -60.4913 -53.6223	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413 -39.5271 -4.45285 2.031244 -40.3749 -49.6157 -40.8777	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.254 -39.0442 -25.2188 -28.3438 -38.0717 -36.4943 -31.4672	23,50406 8,024958 -25,3818 -37,6554 -45,8937 -11,16 -15,1591 -43,3292 -38,9781 -21,4956 -17,2744 -11,3991 -25,5882 -27,202	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779 -19.4652 -17.0484 -32.7834 -30.5866 -35.5294 -33.5237 -39.0935	2.855554 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509 -15.8379 -16.6343 -28.7557 -37.9004 -42.3855	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342 -60.4754 -63.4319 -73.8214 -70.4193 -75.227 -73.5244 -71.7952 -73.5196	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285 -71.16147 -77.2529 -71.9289 -71.9212	-35.4389 -49.2627 -58.3368 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102 -68.7529 -66.5511 -74.8276 -69.8304 -68.4986	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3756 -63.294 -60.7286 -68.0114 -67.4925 -75.5361 -70.8729 -68.8496	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054 -41.9021 -53.3691 -51.1453 -59.0093 -47.8124 -42.5622	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783 -36.7538 -36.7578 -41.5078 -36.3759 -43.98 -39.6578 -38.201	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138 -53.127 -39.0674 -40.9542 -44.5368 -49.1499 -42.2483 -35.4173	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158 -7.2652 -5.1203 -21.0902 -22.0042 -21.9248	-17.8196 -30.8797 -25.3614 -22.9152 -30.2066 -30.5747 -21.6498 8.79686 14.23968 27.26398 7.44067 -0.56494 -21.8228	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549 -22.9669 -27.5749 -19.3179 -31.8853 -36.9607 -50.4376	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868 -26.3714 -17.9771 -30.7534 -35.9131 -49.614
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.07 -0.08 -0.09 -0.11 -0.11 -0.12 -0.13 -0.14	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.9695 -31.9688 -14.6602 -23.4229 -16.7364 -41.5861 -47.5136	-0.09 77.59932 56.50146 16.47531 -1.18898 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305 -52.9097 -41.4343 -37.8421 -46.46 -52.0679 -60.4802 -61.832	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1691 -53.6984 -33.2619 -53.6725 -58.5058 -66.8051 -55.8929	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6399 -49.6357 -55.11 -54.803 -31.6993 7.097221 -36.1937 -42.4817 -56.3925 -64.856	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -35.3255 -40.4536 -70.8706 -71.8861 -44.2735 -39.1413 -56.6457 -56.1535	105.3063 61.69244 -18.8522 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373 -58.6699 -62.1732 -60.4913 -53.6223 -57.7525	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413 -39.5271 -4.45285 2.031244 -40.3749 -49.6157 -40.8777 -48.6226 -51.48 -45.0884	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534 -39.042 -25.2188 -28.348 -38.0717 -36.4943 -31.4672 -39.0792 -34.976 -27.452	23.50406 8.024958 -25.3818 -37.6554 -45.8937 -11.16 -15.1591 -43.3292 -38.9781 -21.4956 -17.2744 -11.3991 -25.5882 -27.202 -39.9008 -43.136 -44.7613	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779 -19.4652 -17.0484 -32.7834 -33.5256 -35.5294 -33.5237 -39.0935 -36.7409 -37.2711	2.855654 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509 -15.8379 -16.6343 -28.7557 -37.9004 -42.3855 -49.4312 -43.8532 -46.3257	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342 -60.4754 -63.4319 -73.8214 -70.4193 -75.227 -73.5244 -71.7952 -73.5196 -72.1091 -71.9802	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285 -70.1045 -71.5289 -71.9289 -71.9212 -73.3224 -72.3905 -68.7822	-35.4389 -49.2627 -58.3368 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1702 -68.7529 -66.5511 -74.8276 -69.8304 -68.4986 -68.6051 -69.7534 -64.6271	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -68.3756 -63.294 -60.7286 -68.0014 -67.4925 -75.5361 -70.8729 -88.8496 -71.243 -66.0543	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054 -41.9021 -53.3691 -51.1453 -59.0093 -47.8124 -42.5622 -41.7328 -54.5186 -50.0015	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783 -36.758 -41.5078 -36.3759 -43.98 -39.6578 -38.201 -45.5218 -53.2387 -38.5488	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2696 -52.8138 -53.127 -39.0674 -40.9542 -44.5358 -49.1499 -42.2483 -35.4173 -42.3811 -51.3533 -45.169	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158 -7.26525 -5.1203 -21.9902 -22.0042 -21.9248 -17.7251 -30.5366 -21.7059	-17.8196 -30.8797 -25.3614 -22.9152 -30.2066 -30.5747 -21.6498 8.79686 14.23968 7.4698 7.44067 -0.56494 -21.8228 -17.0634 -28.468 -18.6612	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549 -22.9669 -27.5749 -19.3178 -31.8853 -36.9607 -50.4376 -47.4203 -54.6505 -48.4332	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868 -26.3714 -17.9771 -30.7534 -35.9131 -49.614 -54.4678 -60.729 -54.7933
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.07 -0.08 -0.09 -0.11 -0.11 -0.12 -0.13 -0.14 -0.15 -0.16 -0.17	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581 -20.9695 -31.9688 -14.6602 -33.4209 -16.7364 -41.5861 -47.5136 -40.0019 -49.2588 -48.8406	-0.09 77.59932 56.50146 16.47531 -1.18898 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305 -52.9097 -41.4343 -37.8421 -46.46 -52.0679 -60.4802 -61.832 -64.1322	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1591 -53.6756 -56.5669 -50.0941 -53.6725 -58.5058 -66.8051 -55.8929 -63.422	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6399 -49.6357 -55.11 -54.6393 <b>7.097221</b> -36.1937 -42.4817 -56.3925 -64.856 -72.44	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -35.3255 -40.4536 -70.8706 -71.8861 -44.2735 -39.1413 -56.6457 -56.1535 -56.9827 -65.2326 -55.9896	105.3063 61.69244 -18.8622 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373 -58.6699 -45.9589 -62.1732 -60.4913 -63.6223 -57.7525 -59.442 -59.2922 -65.6431	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413 -39.5271 -4.45285 2.031244 -40.3744 -40.3744 -49.6157 -40.8777 -48.6226 -51.48 -45.0884 -50.1802	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534 -39.042 -25.2188 -28.3437 -38.4943 -36.4943 -34.945 -34.976 -27.452 -45.3083	23,50406 8,024958 -25,3818 -37,6554 -45,8937 -11,16 -15,1691 -43,3292 -38,9781 -21,4956 -17,2744 -11,3991 -25,5682 -27,202 -39,9008 -43,136 -44,7613 -54,4418	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.28582 -10.0779 -19.4652 -17.0484 -32.7834 -30.5866 -35.5294 -35.5294 -35.5294 -35.6294 -35.6294 -35.72711 -47.3633	2.855654 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0894 -4.36766 -17.7509 -15.8379 -16.6343 -28.7567 -49.4312 -43.8552 -46.3257 -46.3257	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342 -60.4754 -63.4319 -73.8214 -70.4193 -73.5244 -71.7952 -73.5196 -72.1091 -71.9802 -70.5092	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285 -70.1045 -71.6129 -71.9289 -71.9219 -71.9219 -73.3224 -72.3905 -88.7822 -61.951	-35.4389 -49.2627 -58.3368 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102 -68.7529 -66.5511 -74.8276 -69.8304 -68.4986 -68.6051 -69.7534 -64.6271 -65.2954	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -54.7027 -58.3766 -63.294 -60.7286 -68.0014 -67.4925 -75.5361 -70.8729 -68.8496 -71.4415 -71.263 -66.0543 -67.0439	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054 -41.9021 -53.3691 -51.1453 -59.0093 -47.8124 -42.5622 -41.7328 -54.5186 -50.0015 -50.2807	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783 -36.7538 -41.5078 -36.3759 -43.96 -39.6578 -38.201 -45.5218 -53.2387 -38.5488 -50.2764	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138 -53.127 -39.0674 -40.9542 -44.5368 -49.1493 -42.2483 -35.4173 -42.3811 -51.3533 -45.169 -54.3513	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158 -7.26525 -5.1203 -21.0902 -21.9248 -17.7251 -30.5366 -21.7059 -40.2828	-17,8196 -30,8797 -25,3614 -22,9152 -30,2066 -30,5747 -21,6498 8,79686 14,23968 27,26398 7,44067 -0,56494 -21,8228 -17,0634 -28,468 -18,6612 -35,0735	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549 -22.9669 -27.5749 -19.318653 -36.9607 -50.4376 -47.4203 -54.6605 -48.4332 -58.8382	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868 -26.3714 -17.9771 -30.7534 -35.9131 -49.614 -54.4678 -60.729 -54.7933 -63.915
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.07 -0.08 -0.09 -0.11 -0.11 -0.12 -0.13 -0.14 -0.15 -0.16 -0.17 -0.18	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581 -20.9695 -31.9689 -14.6602 -23.4229 -16.7364 -41.5661 -47.5136 -40.0019 -49.2588 -48.8406 -52.4038	-0.09 77.59932 56.50146 16.47531 -1.18898 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305 -52.4305 -52.4305 -52.4305 -52.4313 -46.464 -52.0679 -60.4802 -61.832 -64.1322 -39.6465	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1591 -53.67669 -50.0941 -36.6698 -33.2519 -53.6725 -58.5058 -66.8051 -55.8929 -63.422 -30.4285	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6399 -49.6357 -55.11 -54.603 5.290934 7.097221 -36.1937 -42.4817 -56.3925 -64.856 -72.44 -37.0254	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -35.3255 -40.4536 -70.8706 -71.8861 -44.2735 -39.1413 -56.6457 -56.1535 -56.9827 -65.2326 -55.9806 -68.1269	105.3063 61.69244 -18.8622 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373 -58.6699 -45.9589 -62.1732 -60.4913 -53.6223 -57.7525 -59.442 -59.2922 -65.6431 -64.8338	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413 -39.5271 -4.45285 2.031244 -40.3749 -49.6157 -49.8577 -48.6226 -51.48 -45.0884 -50.1802 -40.1086	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534 -39.0442 -25.2188 -28.348 -38.0471 -36.4943 -31.4672 -39.0792 -34.976 -27.452 -45.3083 -38.9411	23,50406 8,024958 -25,3818 -37,6554 -45,8937 -11,16 -15,1591 -43,3292 -38,9781 -21,4956 -17,2744 -11,3991 -25,5882 -27,202 -39,9008 -43,136 -44,7613 -54,4418 -37,4952	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.26582 -10.0779 -19.4652 -17.0484 -32.7834 -30.5866 -35.5294 -33.5237 -39.0935 -36.7409 -37.2711 -47.3633 -47.3908	2.855654 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509 -15.8379 -16.6343 -28.7557 -37.9004 -42.38552 -49.4312 -43.8532 -46.3257 -46.3257 -49.3428	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342 -60.4754 -63.4319 -73.8214 -70.4193 -75.227 -73.5244 -71.79522 -73.5196 -72.1091 -71.9802 -70.5092 -72.077	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285 -70.6045 -71.6147 -77.2529 -71.9289 -71.9219 -73.3224 -72.3905 -68.7822 -61.951 -63.2827	-35.4389 -49.2627 -58.3368 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102 -68.7529 -66.5511 -74.6276 -69.8304 -68.4966 -68.4966 -68.6051 -69.7534 -65.2954 -65.2954	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -53.294 -60.7286 -63.294 -60.7286 -68.0014 -67.4925 -75.5361 -70.8729 -68.8496 -71.4415 -71.263 -66.0543 -67.0439 -66.9951	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7356 -48.5054 -41.9021 -53.3691 -51.1453 -59.0033 -47.8124 -42.5622 -41.7328 -54.5186 -50.0015 -50.2807 -51.7466	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783 -36.7538 -41.5078 -36.3759 -43.978 -39.6759 -39.6759 -39.201 -45.5218 -38.201 -45.5218 -38.5488 -50.2764 -51.041	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138 -53.127 -39.0674 -40.9542 -44.5388 -49.1499 -42.2483 -35.4173 -42.3811 -51.3533 -45.169 -54.3513 -46.095	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158 -7.26525 -5.1030 -21.0202 -21.0202 -21.9248 -17.7251 -30.5366 -21.7059 -40.2828 -29.4819	-17,8196 -30,8797 -25,3614 -22,9152 -30,2066 -30,5747 -21,6498 8,79686 14,2968 27,26398 7,44067 -0,56494 -0,56494 -21,8228 -17,0634 -28,468 -18,6612 -35,0735 -23,3304	-18,7098 -31,2349 -29,232 -26,9128 -27,8235 -47,1303 -49,7719 -52,2549 -22,9669 -27,5749 -19,3179 -31,8853 -36,9607 -50,4376 -47,4203 -54,6505 -48,4332 -58,8382 -51,3934	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868 -26.3714 -17.9771 -30.7534 -35.9131 -49.614 -54.4678 -60.729 -54.7933 -63.915 -57.3884
	0 -0.01 -0.02 -0.03 -0.04 -0.05 -0.06 -0.07 -0.08 -0.09 -0.11 -0.11 -0.12 -0.13 -0.14 -0.15 -0.16 -0.17	57.49617 45.65905 12.65366 10.88882 27.7352 19.75309 5.971647 -12.8581 -20.9695 -31.9688 -14.6602 -23.4229 -16.7364 -41.5661 -41.5664 -41.5656 -40.0019 -49.2588 -48.8406 -52.4038 -24.7575	-0.09 77.59932 56.50146 16.47531 -1.18898 -10.2168 -14.0323 -31.2606 -39.0785 -57.4305 -57.4305 -52.0977 -41.4343 -37.8421 -46.46 -52.0679 -60.4802 -61.832 -64.1322 -39.6465 -24.4208	-0.08 104.0069 105.6868 34.639 3.894747 8.076917 -28.8779 -32.9175 -47.1591 -53.0847 -56.6689 -50.0941 -36.6689 -33.2519 -53.6725 -58.5058 -66.8051 -55.8929 -63.422 -30.4285 -13.6952	-0.07 74.08703 96.74545 2.291954 -31.1784 -35.0631 -55.3842 -47.6999 -49.6357 -55.11 -54.603 5.290934 7.097221 -36.1937 -42.4817 -56.3925 -64.856 -72.44 -37.0254 -6.79454	77.73156 49.777 -22.0541 -34.2547 -17.5181 -35.6051 -35.3255 -40.4536 -70.8706 -71.8661 -44.2736 -39.143 -56.4537 -56.1535 -56.9827 -65.2326 -55.30374	105.3063 61.69244 -18.8622 -27.7138 -13.083 -39.772 -31.7868 -57.7053 -72.2373 -58.6699 -45.9589 -62.1732 -60.4913 -63.6223 -57.7525 -59.442 -59.2922 -65.6431	30.93488 35.79433 -32.367 -28.6994 -2.82273 -23.864 -7.8272 -27.1413 -39.5271 -4.45285 2.031244 -40.3749 -49.6157 -48.6226 -51.48 -45.0884 -50.1802 -40.1086 -41.9836	47.14156 34.24987 -26.6206 -34.2491 -25.6703 -16.8217 11.76495 -41.2534 -39.0442 -25.2188 -28.348 -38.0471 -36.4943 -31.4672 -39.0792 -34.976 -27.452 -45.3083 -38.9411	23,50406 8,024958 -25,3818 -37,6554 -45,8937 -11,16 -15,1591 -43,3292 -38,9781 -21,4956 -17,2744 -11,3991 -25,5882 -27,202 -39,9008 -43,136 -44,7613 -54,4418 -37,4952 -52,3878	63.97073 54.40681 8.79307 -23.0453 -33.0574 -9.31614 -6.26582 -10.0779 -19.4652 -17.0484 -32.7834 -30.5866 -35.5294 -33.5237 -39.0935 -36.7409 -37.2711 -47.3633 -47.3908 -59.0245	2.855654 -3.73017 -1.00802 -26.9903 -30.3529 0.154989 -3.0694 -4.36766 -17.7509 -15.8379 -16.6343 -28.7557 -37.9004 -42.3855 -49.4312 -43.8532 -46.3257 -46.3257 -49.3428 -47.9267	-59.7151 -63.6186 -71.6601 -61.6397 -52.4564 -61.296 -59.1342 -60.4754 -63.4319 -73.8214 -70.4193 -75.227 -73.5244 -71.79522 -73.5196 -72.1091 -71.9802 -70.5092 -72.077	-44.481 -53.7977 -56.4333 -47.6703 -49.9002 -53.3318 -62.0054 -59.3431 -66.0285 -70.1045 -71.6147 -77.5229 -71.9289 -71.9292 -71.9224 -72.3905 -68.7822 -61.951 -63.2827 -46.7881	-35.4389 -49.2627 -58.3368 -41.9475 -40.6338 -38.8875 -45.7104 -53.7227 -60.1102 -68.7529 -66.5511 -74.8276 -69.8051 -68.4986 -68.4986 -68.4986 -68.9051 -69.7534 -65.2954 -65.2954 -65.752 -49.1817	-37.8453 -40.9628 -54.0633 -56.8535 -56.2546 -53.294 -60.7286 -68.014 -67.4925 -75.5361 -70.8729 -68.8496 -68.8496 -68.8496 -68.8496 -71.4415 -71.263 -66.0543 -67.0439 -66.9951 -49.2911	-16.282 -24.701 -26.716 -30.0352 -34.2398 -42.4122 -39.7366 -48.5054 -41.9021 -53.3691 -51.1453 -59.003 -47.8124 -42.5622 -41.7328 -54.5186 -50.0015 -50.2807 -51.7466 -49.6587	-18.6495 -34.5842 -30.032 -36.2689 -37.9746 -48.0784 -43.9369 -50.783 -36.7538 -41.5078 -36.7538 -43.9578 -39.6759 -39.6759 -39.6759 -39.6759 -38.5488 -50.2764 -51.041 -49.9413	-34.0173 -50.1273 -47.5587 -52.6754 -44.4585 -59.2596 -52.8138 -53.127 -39.0674 -40.9542 -44.5388 -49.1499 -42.2483 -42.2483 -45.169 -54.3513 -46.095 -44.8841	-30.1975 -43.0303 -43.1139 -44.6632 -33.8943 -49.0204 -39.5473 -35.0227 -14.158 -7.26525 -5.1203 -21.0902 -21.9248 -17.7251 -30.5366 -21.7059 -40.2828	-17.8196 -30.8797 -25.3614 -22.9152 -30.2066 -30.5747 -21.6498 8.79686 14.23968 27.26398 7.44067 -0.56494 -21.8228 -17.0634 -28.468 -18.6612 -35.0735 -23.3304 -21.4161	-18.7098 -31.2349 -29.232 -26.9128 -27.8235 -47.1303 -49.7719 -52.2549 -22.9669 -27.5749 -19.318653 -36.9607 -50.4376 -47.4203 -54.6605 -48.4332 -58.8382	-7.96491 -22.7647 -22.8796 -23.1499 -24.1075 -37.3853 -44.7924 -47.5216 -21.6868 -26.3714 -17.9771 -30.7534 -35.9131 -49.614 -54.4678 -60.729 -54.7933 -63.915



# THE OPTIMIZER TABLES WORKSHEET – SECOND HALF

				BUY	VALUES																		
	SPY	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
	0	23.78061	23.74702	15.28713	10.37281	29.70499	19.74795	25.8321	21.91529	44.97656	89.93306	6.256472	-41.2002	-32.2328	-22.1119	-27.2148	-23.6918	-15.5671	-13.0018	-10.5865	-8.65876	-10.2503	-8.01802
SELL	-0.01	41.28848	37.44726	28.05077	21.55084	31.15278	36.64971	14.57099	20.54309	33.81887	41.24137	-12.9112	-44.0687	-37.6104	-26.5816	-31.1814	-20.9419	-12.3953	-9.07269	-10.8622	-8.94038	-10.1577	-8.01802
VALUES	-0.02	29.40122	24.67056	16.14754	2.75068	23.01978	46.21262	1.052704	11.71565	28.03884	15.50604	-2.49816	-34.1587	-35.8159	-22.6401	-32.8024	-20.0023	-9.825	-8.97098	-10.8904	-14.3952	-13.6007	-9.97458
	-0.03	24.75552	15.88171	-0.86147	-2.87247	11.0042	23.73131	-14.8921	39.82952	21.91548	-16.6448	-5.11251	-41.1915	-47.8245	-33.1272	-37.617	-25.7225	-16.8369	-15.2965	-13.9596	-15.0955	-14.3076	-11.9927
	-0.04	24.32267	14.1325	1.555766	-1.46811	7.951951	8.682531	-28.6947	-1.29355	2.792515	1.52271	2.397546	-49.7231	-38.5142	-24.2141	-32.5235	-19.0033	-12.0908	-6.18513	-11.4211	-10.5884	-13.5182	-9.60469
	-0.05	16.57205	4.626527	-6.90271	-19.1822	-16.4989	-2.93657	-33.0208	13.98601	-7.23525	4.711606	-21.9319	-38.8507	-35.3328	-25.9833	-29.7224	-18.6799	-9.03383	-13.6434	-20.3627	-19.3335	-21.9768	-17.5887
	-0.06	16.57205	37.00088	21.90418	-6.61788	-17.457	-15.2389	-44.6689	12.9182	7.165107	-1.68834	-25.9953	-26.1429	-19.4665	-12.5543	-21.3035	4.639339	22.78613	27.78075	12.74779	-8.97758	-11.9602	-7.37973
	-0.07	10.04304	45.92081	29.84119	14.68249	6.381575	-13.6235	-0.19709	22.90608	-7.61337	-8.16152	-29.2289	-12.9625	-19.4844	-5.30653	-25.5059	7.290391	31.5424	27.8078	25.92707	3.16837	-0.21228	9.444946
	-0.08	8.882738	44.38221	28.47213	8.072523	11.49075	-19.8546	34.78095	11.55448	-4.28258	-7.45746	-19.9228	-26.1869	-29.4138	-14.4154	-8.4977	35.29859	70.21986	69.44523	72.41535	1.760852	-1.57368	9.444946
	-0.09	17.32181	55.57271	38.4295	-32.1018	15.67869	-22.3795	5.020603	18.16757	-0.87029	-4.46601	-14.8829	5.073979	-3.02796	12.89293	18.85939	49.61379	101.4577	100.5409	105.678	18.25183	14.37692	18.86493
	-0.1	14.96209	52.44364	45.89029	25.76359	16.92627	-25.765	-3.23124	11.692	-15.084	-11.2155	-19.9866	-11.379	-13.1354	3.267654	7.464023	29.90687	79.65635	80.34946	89.40863	9.461678	5.874806	11.03337
	-0.11	10.81302	-4.63202	-8.73176	-24.0398	-32.2106	-31.2193	-21.781	26.26975	-8.68021	-16.7895	-26.392	-14.9921	-7.04262	0.078817	-6.69236	1.952766	57.24977	61.88986	73.34709	0.715994	-2.5843	3.397158
	-0.12	6.089858	-8.69687	-9.6351	-33.4168	-41.8191	-38.3442	-3.07305	17.18378	-14.7562	-19.0847	-36.3532	-19.7745	-23.1222	-5.10573	-11.5261	-14.2084	43.61193	47.8496	64.73765	-0.88463	-4.13247	3.397158
	-0.13	3.85592	-10.6194	-12.8453	-3.75534	-9.97896	-17.2601	-10.5701	1.970097	-14.6018	-12.3265	-28.664	-17.3174	-23.832	-16.3233	-18.3599	-18.9419	38.2325	43.37786	61.91325	-2.58394	-5.7761	2.587295
	-0.14	-3.14056	34.96654	18.63828	-19.964	-27.3328	-30.3332	-11.6398	-13.2366	-14.5014	-19.3844	-31.381	-0.85698	-8.66847	-13.4022	-17.7468	-15.9636	24.75156	31.15262	55.06541	-6.70398	-9.76114	-0.7698
	-0.15	-7.15862	29.36767	12.42287	-21.0525	27.82381	22.78003	16.59968	-21.643	-20.874	-19.8964	-31.3774	-15.7929	-18.0914	-6.62128	-11.3061	-9.38324	21.93585	32.80245	57.01606	57.01606	51.87091	-6.35063
	-0.16	-15.1911	18.44886	7.948774	-27.7485	49.60696	28.76051	14.12248	-18.199	-20.5661	-22.4909	-32.4062	-14.0546	-16.4005	-1.39524	-6.34225	-6.05318	13.48858	23.60239	51.52334	51.52334	46.55818	-8.6972
	-0.17	-18.1917	14.25814	4.129546	-22.9354	43.56179	27.91234	-12.4289	-14.9934	-24.8589	-23.5752	-31.9643	-12.8549	-15.2336	7.867294	5.221045	2.377767	6.662663	16.74836	43.89713	43.89713	39,18186	-11.4499
	-0.18	-23.8007	14.86405	4.681748	-23.6215	36.77257	15.05065	-6.57125	-16.8691	-21.3818	-17.1542	-30.6137	-10.8425	-15.0264	-10.0673	-12.2736	-14.5653	-6.36808	3.859116	36.33475	36.33475	31.86729	-15.7331
	-0.19	30.32777	96.45808	56.19086	26.94318	14.86465	9.602132	-3.82687	-8.73726	-14.9316	-16.1159	-26.5352	-13.0066	-17.089	-18.0151	-20.0264	-21.6836	-14.1693	4.760314	41.76928	41.76928	37.12374	37.54685
	-0.2	25.37196	65.00129	59.88824	19.81677	9.186317	4.673537	-5.42525	-10.254	-15.7042	-25.0518	-26.5352	-18.2826	-22.1174	-22.9874	-24.8767	-26.4334	-15.5958	3.019217	39,4131	39,4131	34.84477	35.26085
				BUY	VALUES																		
	DIA	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
	-	15.48522		17.54675	18.02244	33.34234	21.12824	12.28609	17.37846	53,5907	45.84269	11.63716	-20.7392	-7.33046	-20.5253			-15.8216	-8.59517	-8.84839	-8.51972		
SELL	-0.01	13.82884	21.3006	16.82034	12.6217	26.99849	19.34694	3.204591	8.199595	21.54212	21.21433	21.92066	-14.3278	0.658573	-6.11943			-6.38308	-1.26375	-10.6757	-10.3536		-11.096
VALUES	-0.02	3.130926	9.900463	5.841274	4.665213	10.54159	3.653214		0.00021		44.59407	10.97571	-31.7535	-14.0262	-14.1081	-30.7578		-9.28393	-6.70404	-12.1237	-11.8069		-11.096
	-0.03	6.255388	9.347276	5.372576	4.142073		12.61428					6.119524	-11.5784	-10.9592	6.032744	-22.2133		1.228972	7.646628	-7.37556	-9.43471		
	-0.04	12.47393	10.95036	8.697189	2.836297	8.716393	-0.26614	26.23577	30.43159			-4.2681	-12.1547	-6.0979	6.602427	-21.0834	-4.00963	-1.45865	7.042016	-10.1662	-11.8204		
	-0.05	13.96884	8.728591	35.47788	27.0537	43.36288	19.28018	4.307004		35.75695	3.939268	-17.4093	0.561329		7.000481	-28.7697	-9.90683	-3.31924	2.481882	-13.9933	-11.9379		
	-0.06	12.95794	6.1409	27.50955	15.54728	23.7447	11.03994	-10.8688	-2.10302		13.49054	-2.98355		13.53583	-6.04997	-38.5941	-10.6009	-1.75979	-0.45971	-16.2188	-14.2166		
	-0.07	16.50302	6.056097	22.12805	24.8523	18.04227	10.64045	-2.77089	0.64127	12.86418	3.863959	-5.35395	2.423029	1.864813	-5.51366		14.90836	18.63751			5.188844		
	-0.08	15.37196	7.678266	50.08368	42.66694	55.72276	30.68378	20.83168	14.42738	32.24051	2.180236	-0.92974	14.6896		29.35396	-0.73893	47.7633	42.45438	50.79335	46.73629	43.80196		-16.5685
_	-0.09						31.71881		24.87994	30.8643		5.001142		43.81402					97.47783		88.32196		-17.576
	-0.1	4.888276	2.108763	46.17391	31.08744		5.605987	33,15732	31.88779			9.379473			24.72881	9.48145		59.36897	CF 00400	73.74532	70.27087	3.046527	-24.5125
	-0.11	1.899908	46.52325	-7.39682 -9.09134	-17.2372 -18.7516		-0.91461 -5.70651	26.13532	42.65866	26.22752	7.451082	2.938998			28.45885			43.5932	65.98198 58.50149	59 01031	63.18496 55.83053	-0.29102 -2.53264	
	-0.12 -0.13	-9.21949	24.72252	24.73929	4.952739	5.36598	-5.06487	-3.40507 44.3532	-7.71939		-4.14613	-4.87917 -4.25395	6.191819 -6.70634		35.36009		24.37791 9.163936	27.73501	41 63309		44.19116	-2.55264	
	-0.14	-12.2038	20.83071	20.84695	1.67782	-0.76883	-11.1481	39.91572	-11.6902			-7.94882	10.59262		15.88849 £ 010005			3.908886	33,1651	38.33659	35.57023	-14.4571	-33.9203 -34.1101
	-0.15	-13.0947 -15.7783	19.26107	19.2771	0.356984	-1.55644	-6.70111	37.87533	-5.97956		-6.26372	-6.28785	-1.37358		5.918685				30.56238	35.63279	32.9205		-34.1101 -36.5294
			12.40731	12.40731	-17.1087	44.7808	56.71749	14.98905	1.671832	11.77929	-2.96684	-3.90454	16.28167	10.94901	8.57217 5.350104	0.770869		-4.54288	22.82931	38,40982	35.64199		
	-0.16		10.00074	E ECONER	10 1704	41 001 AC	20,124															73300 00	
	-0.17	-15.7864		5.568055	-19.1724	41.03146	32,131	-12.1111	9.67657	21.79058	-3.8798	-3.90454						-11.3689	14.25804	28,7513	26.17662		-40.9585
	-0.17 -0.18	-15.7864 -21.0186	3.129559	3.14342	-24.6702	31.22114	26.46361	12.27325	1.784826	11.69403	-3.8798	-3.90454	9.073039	4.070965	0.261871	-6.4877	-7.9958	-15.6497	10.60602	24.63604	22.14366	25.17259	-42.2376
	-0.17 -0.18 -0.19	-15.7864		3.14342 1.233615	-24.6702 -24.6702	31.22114 27.55867		12.27325 7.736201	1.784826 1.032447	11.69403 10.86841	-3.8798 -4.59731	-3.90454 -4.62187	9.073039 -1.83438		0.261871 -9.76443	-6.4877 -15.839	-7.9958 -17.1963	-15.6497 -24.0848	10.60602 5.494287		22.14366 16.4987	25.17259 19.38765	-42.2376 -44.2635



# THE BACK-TEST RESULTS WORKSHEET

10/30/00 SL

11/01/00 B

11/10/00 SL

11/15/00 B

11/22/00 SL

	Sell Method	Buy Method	Start Date	Stop Date	Period
	TS	5 day 1 % Change	5/26/00	10/30/09	day
Ticker	IWM	QQQQ	SPY	DIA	
Std Dev in Period	1.675%	2.087%	1.405%	1.333%	
Mean Return	0.027%	-0.004%	0.004%	0.014%	
Buy & Hold Return	37.156%	-45.885%	-12.155%	13.613%	
Max Buy & Hold Draw Down	-58.860%	-80.450%	-55.189%	-52.322%	
Max Draw Down Date	03/09/09	10/09/02	03/09/09	03/09/09	
Opt Sell	10.000%	10.000%	10.000%	10.000%	
Opt Buy	1.000%	1.000%	1.000%	1.000%	
Opt Return	58.719%	-70.419%	-11.379%	6.341%	
Opt Drawdown	-11.851%	-14.404%	-13.676%	-15.499%	
Total Trades with Opt Strategy	50	86	38	34	
Winning Sales	8	9	4	5	
Losing Sales	17	34	15	12	
Transaction Dates and Types	IWM		QQQQ		SPY
	06/05/00	В	06/05/00	В	06/05/00 B
	07/28/00	SL	07/28/00	SL	10/11/00 SL
	08/04/00	В	08/04/00	В	10/19/00 B
	10/09/00	SL	09/12/00	SW	12/20/00 SL
	10/19/00	В	09/19/00	В	12/27/00 B
	11/29/00	SL	10/03/00	SL	02/28/01 SL
	12/05/00	В	10/18/00	В	03/07/01 B

03/12/01 SL

09/05/01 SW

06/06/02 SW

03/27/01 B

09/27/01 B

06/05/00 B 10/12/00 SL 10/19/00 B 03/16/01 SL 03/27/01 B 07/10/01 SW 07/13/01 B 09/17/01 SL 09/27/01 B 06/11/02 SW 06/18/02 B

07/12/02 SL

03/21/01 SL

07/24/01 SL

03/27/01 B

07/30/01 B

09/07/01 SL

DIA

### **HOW OFTEN SHOULD YOU LOOK?**

- ONE WAY TO FIT THIS PROCESS TO YOUR INVESTING STYLE IS TO SELECT A SAMPLING INTERVAL OF ONE DAY IF YOU WANT TO REBALANCE EVERY DAY, ONE WEEK IF EVERY WEEK, AND ONE MONTH IF EVERY MONTH.
- IN GENERAL, WITHOUT COUNTING TRADING COSTS AND BID-ASK SPREADS (WHICH CAN BE *VERY* IMPORTANT), THE MORE OFTEN YOU LOOK AT YOUR SITUATION THE BETTER YOU SHOULD DO. LET'S SEE IF THAT'S TRUE.



## **DAILY TRAILING STOP RESULTS**

	<b>Sell Method</b> TS	<b>Buy Method</b> 5 day % Change	<b>Start Date</b> 5/26/00	Stop DatePeriod10/30/09day
Ticker	IWM	QQQQ	SPY	DIA
Std Dev in Period	1.675%	2.087%	1.405%	1.333%
Mean Return	0.027%	-0.004%	0.004%	0.014%
Buy & Hold Return	37.156%	-45.885%	-12.155%	13.613%
Max Buy & Hold Draw Down	-58.860%	-80.450%	-55.189%	-52.322%
Max Draw Down Date	03/09/09	10/09/02	03/09/09	03/09/09
Opt Sell	17.000%	1.000%	9.000%	9.000%
Opt Buy	-9.000%	-8.000%	8.000%	7.000%
Opt Return	170.518%	105.687%	105.678%	97.478%
Opt Drawdown	-29.225%	-23.051%	-25.348%	-24.654%
Total Trades with Opt Strategy	14	90	12	14
Winning Sales	4	26	2	3
Losing Sales	3	19	4	4

Transaction Dates and Types	IWM	QQQQ	SPY	DIA
	09/17/01 B	07/27/00 B	07/29/02 B	04/10/01 B
	07/02/02 S	07/31/00 S	09/17/02 S	07/06/01 S
	07/23/02 B	08/02/00 B	10/15/02 B	07/29/02 B
	10/07/02 S	08/09/00 S	01/27/03 S	09/17/02 S
	10/09/02 B	09/11/00 B	03/18/03 B	10/15/02 B
	01/08/08 S	09/15/00 S	08/15/07 S	01/27/03 S
	09/29/08 B	10/11/00 B	10/31/08 B	03/17/03 B
	10/14/08 S	10/17/00 S	11/06/08 S	11/21/07 S
	10/24/08 B	10/30/00 B	11/26/08 B	10/31/08 B
	11/18/08 S	11/07/00 S	01/14/09 S	11/06/08 S
	11/19/08 B	11/10/00 B	03/12/09 B	11/26/08 B
	02/18/09 S	11/16/00 S	10/30/09 S	01/14/09 S
	02/23/09 B	11/21/00 B		03/12/09 B
	10/30/09 S	11/27/00 S		10/30/09 S
		11/29/00 B		





				BUY	VALUES																		
	IWM	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
	0	5.805279	-2.54929	-4.40918	-2.68594	-4.36586	20.4662	-10.7829	53.64385	34.30514	52.56743	61.56962	-33.475	-53.3921	-59.2021	-45.6928	-38.5742	-39.3809	-35.7012	-24.2221	-19.8096	-17.829	-17.829
SELL	-0.01	10.22909	1.525207	-7.54076	3.273731	11.8023	26.46739	2.513346	38.52354	28.9914	-5.53436	-3.20127	-48.516	-64.342	-66.8291	-53.9528	-51.496	-38.7092	-32.6561	-17.3097	-20.6037	-18.8606	-18.8606
VALUES	-0.02	8.612108	-5.09414	-14.7858	-7.78028	7.953493	10.69151	-7.64992	17.70757	14.29947	36.39476	44.87498	-37.8286	-58.9534	-59.9889	-42.5678	-44.8819	-38.5218	-35.5607	-24.2058	-26.1914	-22.7983	-22.7983
	-0.03	-6.00811	-11.6804	-4.83346	-3.98811	17.82811	-9.31085	-49.2476	-27.102	-13.7919	43.59266	46.54458	-34.4161	-59.5429	-55.5253	-49.071	-48.0811	-48.1463	-46.7869	-33.7768	-32.6221	-27.1602	-27.1602
	-0.04	-6.63376	-14.3847	-1.13763	-10.3586	12.69354	29.41396	-2.43107	40.41834	20.33268	14.95456	49.70131	-19.5126	-36.212	-31.4193	-27.1855	-31.0476	-32.1158	-38.1442	-35.8317	-36.1242	-29.7772	-29.7772
	-0.05	-6.95274	-19.2171	-8.84191	-8.61327	11.27865	42.60518	1.057616	42.36181	15.7895	9.020441	43.70449	15.49792	-5.64977	4.33083	8.948514	3.731499	1.008559	-30.7794	-26.1956	-29.9304	-22.968	-22.968
	-0.06	-10.5653	-22.3536	-13.2723	-12.2747	-6.39446	3.000679	-0.84519	10.9861	26.06391	7.439919	24.66717	13.72255	-4.70563	3.232555	-0.40099	2.678632	12.55306	-26.2141	-26.108	-26.8695	-22.9602	-22.9602
	-0.07	3.350826	-8.50375	-4.60793	-13.9485	-18.8501	19.46705	-16.7021	-15.7634	17.0091	20.60818	50.2204	51.97946	30.4611	20.20241	17.98397	14.6236	17.18331	-27.5027	-23.3945	-20.0838	-15.1218	-15.1218
	-0.08	43.30979	26.09074	22.93541	8.301396	-36.0849	-5.7273	-33.4885	3.687399	24.28924	17.78047	32.39736	49.808	28.48506	22.17693	7.712504	4.764582	10.69817	-26.1711	-17.2012	-13.6229	-13.6229	-13.6229
	-0.09	34.90154	21.03391	21.09436	-5.31878	-45.7541	33.7753	-48.3096	-0.17044	23.0827	18.44249	29.17745	27.96337	27.90412	15.83286	3.589837	-4.02466	7.893611	-35.6708	-26.102	-20.8449	-20.8449	-20.8449
	-0.1	-2.9176	-15.3739	38.30675	-2.82131	-34.1556	6.150656	-28.978	16.03149	10.06128	11.00237	27.31577	58.71944	38.55167	35.09561	7.617617	-10.9788	6.470646	-31.8319	-15.7375	-9.03804	-9.03804	-9.03804
	-0.11	-4.88295	-20.396	-24.4498	-30.4092	-12.557	4.867262	-24.6778	11.84178	8.802126	8.622732	28.5764	28.63447	11.3407	15.03725	-15.7994	-29.3548	-8.22655	-39.8394	-20.6882	-14.3824	-14.3824	-14.3824
	-0.12	-11.7238		32.04982	12.5336	-3.81383	15.26092	-27.0184	4.469319	-1.7469	4.562185	18.72279	33.53908	15.58593	30.57231	12.49087	-19.1938	-0.49388	-38.5269	-18.352	-11.8604	-11.8604	-11.8604
	-0.13	-13.1344	-9.3515	28.04891	8.032415	-8.6348	-16.5216	-34.4702		-5.53785	1.090543	18.10606	35.50004	17.26243	15.75072	5.597788	-17.9631	-15.1887	-45.023	-23.1605	-17.0512	-17.0512	
		-16.0675		-29.9657	-30.9641	-13.8039	-3.71369		-26.9955	-6.96693		22.17233	44.19731	27.76572	20.72527	16.70312	-11.1107	-18.0873		-27.3891	-19.8109	-19.8109	
	-0.15		-17.1494	-35.1225		4.39887	1.645495		-23.1834	8.436229	-0.41827	9.198421	26.66225	19.08417		12.52211	-3.12398	18.0279	-48.5989	-28.1073	-20.604	-20.604	-20.604
	-0.16	-21.552	71.67282	44.39611	51.76059				4.854194	19.98516	9.595071	16.77163	47.96421	36.80668	29.58378	25.54534	19.83334	18.28932		-33.4874		-25.5092	
				131.9397		31.68764		-7.71893		18.2076	9.595071	16.77163		28.608		18.02154	12.65185	11.20036	14.41333	-39.6043		-28.9853	
		8.968825		67.55486			28.61914	-11.3077	3.745308		7.985518	16.77163		23.0895	16.59082			11.2559	7.291841	-48.8051	-38.859	-38.859	
	-0.19	5.37624		52.54076		0.775915	26.65966	-9.94491	-1.78896	15.8225	10.04336	23.69627	32,1691			17.41419		15.61491	22.8307	-41.3907	-30.0041	-30.0041	
	-0.2	8.296938	83.32406	51.05245	47.6915	-1.19438	29.14454	-29.3835	-6.68935	10.04336	10.04336	20.57554	21.6368	14.35938	8.057678	8.057678	7.790636	6.401782	15,79163	-44.205	-33.3652	-33.3652	-33.3652
				<b>D</b> U 11/2																			
	0000	0.4		BUY	VALUES	0.00	0.05	0.04	0.00	0.00	0.04	45.47	0.04	0.00	0.00	0.04	0.05	0.00	0.07	0.00	0.00	0.4	0.44
	0000	-0.1	-0.09	-0.08	-0.07 74.08703	-0.06 77.73156	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17 2.855554	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	-7.96491
SELL		45 65905		105.6868		49.777	61.69244			8.024958			-59.7151	-44.481 -53.7977	-35.4369	-37.0453	-16.262	-16.6495		-30,1975	-17.8196	-10.7090	1100101
VALUES	-0.01	12.65366	16.47531	34.639			-18.8522	-32.367	-26.6206	-25.3818		-1.00802		-55.7377	-49.2027	-40.9620	-24.701	-30.032		-43.0303		-29.232	
TALOLU	-0.02	10.88882	-1.18898	3 894747			-27.7138	-28.6994	-34.2491	-37.6554	-23.0453			-47.6703	-41.9475	-56.8535	-30.0352		-47.5357	-44.6632	-22.9152	-26.9128	
	-0.03	27.7352		8.076917	-35.0631		-13.083		-25.6703	-45.8937				-49.9002	-40.6338	-56.2546	-34.2398	-37.9746		-33.8943	-13.279		
	-0.05	19,75309	-10.2168	-28.8779			-39.772	-23.864				0.154989					-42.4122	-48.0784	-59.2596	-49.0204	-30.2066	-47.1303	
	-0.06	5.971647	-14.0323	-32.9175			-31,7868		11.76495	-15,1591	-6.28582	-3.0694			-45.7104			-43.9369		-39.5473		-49.7719	
	-0.07	-12.8581	-31.2606	-47.1591	-49.6357	-35.3255	-57.7053		-41.2534	-43.3292				-59.3431	-53.7227	-63.294	-48.5054	-50,783		-35.0227	-21.6498	-52.2549	
	-0.08	-20.9695	-39.0785	-53.0847	-55.11	-40.4536	-72.2373	-39.5271			-19.4652				-60.1102		-41.9021	-36,7538		-14.158	8.79686	-22.9669	
	-0.09	-31.9688	-57.4305	-56.5669	-54.803		-58,6699	-4.45285		-21.4956	-17.0484			-70.1045	-68.7529	-68.0014	-53.3691	-41.5078		-7.26525	14.23968	-27.5749	
	-0.1	-14.6602	-52,9097	-50.0941	-31.6992	-71.8861	-45,9589	2.031244		-17.2744	-32,7834	-16.6343	-70,4193	-71.6147	-66.5511	-67.4925	-51.1453	-36.3759	-44.5358	-5.1203	27.26398	-19.3179	-17.9771
	-0.11	-23.4229	-41.4343	-36.6698	5.290934	-44.2735	-62.1732	-40.3749	-38.0717	-11.3991	-30.5866	-28.7557	-75.227	-77.2529	-74.8276	-75.5361	-59.0093	-43.98	-49.1499	-21.0902	7.44067	-31.8853	-30.7534
	-0.12	-16.7364	-37.8421	-33.2519	7.097221	-39.1413	-60.4913	-49.6157	-36.4943	-25.5882	-35.5294	-37.9004	-73.5244	-71.9289	-69.8304	-70.8729	-47.8124	-39.6578	-42.2483	-22.0042	-0.56494	-36.9607	-35.9131
	-0.13	-41.5861	-46.46	-53.6725	-36.1937	-56.6457	-53.6223	-40.8777	-31.4672	-27.202	-33.5237	-42.3855	-71.7952	-71.9512	-68.4986	-68.8496	-42.5622	-38.201	-35.4173	-21.9248	-21.8228	-50.4376	-49.614
	-0.14	-47.5136	-52.0679	-58.5058	-42.4817	-56.1535	-57.7525	-48.6226	-39.0792	-39.9008	-39.0935	-49.4312	-73.5196	-73.3224	-68.6051	-71.4415	-41.7328	-45.5218	-42.3811	-17.7251	-17.0634	-47.4203	-54.4678
	-0.15	-40.0019	-60.4802	-66.8051	-56.3925	-56.9827	-59.442	-51.48	-34.976	-43.136	-36.7409	-43.8532	-72.1091	-72.3905	-69.7534	-71.263	-54.5186	-53.2387	-51.3533	-30.5366	-28.468	-54.6505	-60.729
	-0.16	-49.2588	-61.832	-55.8929	-64.856	-65.2326	-59.2922	-45.0884	-27.452	-44.7613	-37.2711	-46.3257	-71.9802	-68.7822	-64.6271	-66.0543	-50.0015	-38.5488	-45.169	-21.7059	-18.6612	-48.4332	-54.7933
	-0.17	-48.8406	-64.1322	-63.422	-72.44	-55.9896	-65.6431	-50.1802	-45.3083	-54.4418	-47.3633	-46.3257	-70.5092	-61.951	-65.2954	-67.0439	-50.2807	-50.2764	-54.3513	-40.2828	-35.0735	-58.8382	-63.915
																						E4 0004	-57.3884
	-0.18	-52.4038	-39.6465	-30.4285	-37.0254	-68.1269	-64.8338	-40.1086	-38.9411	-37.4952	-47.3908	-49.3428	-72.077	-63.2827	-66.5752	-66.9951	-51.7466	-51.041	-46.095	-29.4819	-23.3304	-51.3934	-57.3884
	-0.18 -0.19	-52.4038 -24.7575	-39.6465 -24.4208	-30.4285 -13.6952			-57.328	-41.9836		-52.3878	-59.0245	-47.9267	-55.4999	-46.7881	-49.1817	-49.2911	-49.6587	-51.041 -49.9413		-29.4819 -27.8979		-51.3934 -28.7239	



## WEEKLY TRAILING STOP RESULTS

Ticker         IVM         QQQQ         SPY         DIA           Std Dev in Period         3.314%         3.976%         2.709%         2.618%           Mean Return         0.104%         -0.074%         0.005%         0.058%           Buy & Hold Return         26.584%         -52.898%         -14.622%         12.233%           Max Buy & Hold Draw Down         -57.895%         -80.170%         -54.614%         -51.395%           Max Draw Down Date         03/02/09         09/30/02         03/02/09         03/02/09           Opt Sell         4.000%         6.000%         8.000%         -10.000%           Opt Return         1773.325%         58.173%         132.451%         194.450%           Opt Drawdown         -58.821%         -78.472%         -53.322         -75.3222%           Total Trades with Opt Strategy         36         16         16         16           Vinning Sales         13         4         4         5           Losing Sales         5         4         4         3           Vinning Sales         11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/27/00 B         09/12/01 B         09/10/01 B         09/12/01 S		<b>Sell Method</b> TS	Buy Method 4 week % Change	<b>Start Date</b> 6/10/00	<b>Stop Date</b> 10/30/09		
Mean Return         0.104%         -0.074%         0.005%         0.058%           Buy & Hold Return         26.584%         -52.898%         -14.622%         12.233%           Max Buy & Hold Draw Down         -57.895%         -80.170%         -54.614%         -51.395%           Max Draw Down Date         03/02/09         03/02/09         03/02/09         03/02/09           Opt Sell         4.000%         6.000%         8.000%         8.000%           Opt Buy         -8.00%         11.000%         -10.000%         -50.22%           Opt Return         173.325%         58.173%         132.451%         194.450%           Opt Drawdown         -58.821%         -78.472%         -54.354%         -52.322%           Total Trades with Opt Strategy         36         16         16         16           Winning Sales         13         4         4         3           Losing Sales         5         4         4         3           11/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/27/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/22/01 S         04/22/02 S         09/16/02 S           03/12/01 B	Ticker	IWM	QQQQ	SPY	DIA		
Buy & Hold Return         26.584%         -52.898%         -14.622%         12.233%           Max Buy & Hold Draw Down         -57.895%         -80.170%         -51.395%           Max Draw Down Date         03/02/09         09/30/02         03/02/09         03/02/09           Opt Sell         4.000%         6.000%         8.000%         8.000%           Opt Buy         -8.000%         11.000%         -10.000%         -10.000%           Opt Return         173.325%         58.173%         132.451%         194.450%           Opt Drawdown         -58.821%         -78.472%         -54.354%         -52.322%           Total Trades with Opt Strategy         36         16         16         16           Winning Sales         13         4         4         5           Losing Sales         5         4         4         3           Transaction Dates and Types         IWM         QQQQ         SPY         DIA           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/12/700 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/22/01 S         04/22/02 S         09/6/20 S           03/12/01 B         04/16/01 B	Std Dev in Period	3.314%	3.976%	2.709%	2.618%		
Max Buy & Hold Draw Down         -57.895%         -80.170%         -54.614%         -51.395%           Max Draw Down Date         03/02/09         09/30/02         03/02/09         03/02/09           Opt Sell         4.000%         6.000%         8.000%         8.000%           Opt Buy         -8.000%         11.000%         -10.000%         -10.000%           Opt Return         173.325%         58.173%         132.451%         194.450%           Opt Drawdown         -58.821%         -78.472%         -54.354%         -52.322%           Total Trades with Opt Strategy         36         16         16         16           Winning Sales         13         4         4         5           Losing Sales         5         4         4         3           Transaction Dates and Types         IWM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/27/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/22/01 S         04/16/01 B         07/15/02 B           03/12/01 B         04/16/01	Mean Return	0.104%	-0.074%	0.005%	0.058%		
Max Draw Down Date         03/02/09         09/30/02         03/02/09         03/02/09           Opt Sell         4.000%         6.000%         8.000%         8.000%           Opt Buy         -8.000%         11.000%         -10.000%         -10.000%           Opt Return         173.325%         58.173%         132.451%         194.450%           Opt Drawdown         -58.821%         -76.472%         -54.354%         -52.322%           Total Trades with Opt Strategy         36         16         16         16           Winning Sales         13         4         4         5           Losing Sales         5         4         4         3           Transaction Dates and Types         IWM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/27/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/29/01 S         04/22/02 S         09/23/02 S           03/12/01 B         06/18/01 S         06/11/01 S         09/23/02 S           06/18/01 S         06/11/01 S         09/23/02 S	Buy & Hold Return	26.584%	-52.898%	-14.622%	12.233%		
Opt Sell         4.000%         6.000%         8.000%         8.000%           Opt Buy         -8.000%         11.000%         -10.000%         -10.000%           Opt Return         173.325%         58.173%         132.451%         194.450%           Opt Drawdown         -58.821%         -78.472%         -54.354%         -52.322%           Total Trades with Opt Strategy         36         16         16         16           Winning Sales         13         4         4         5           Losing Sales         5         4         4         3           Transaction Dates and Types         IWM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/106/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/27/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/29/01 S         04/22/02 S         09/16/02 S           03/12/01 B         04/16/01 B         07/15/02 B         09/23/02 S         01/12/03 S           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B         02/03/03 B         02/03/03 B           09/10/01 B <th>Max Buy &amp; Hold Draw Down</th> <th>-57.895%</th> <th>-80.170%</th> <th>-54.614%</th> <th>-51.395%</th> <th></th> <th></th>	Max Buy & Hold Draw Down	-57.895%	-80.170%	-54.614%	-51.395%		
Opt Buy         -8.000%         11.000%         -10.000%         -10.000%           Opt Return         173.325%         58.173%         132.451%         194.450%           Opt Drawdown         -58.821%         -78.472%         -54.354%         -52.322%           Total Trades with Opt Strategy         36         16         16         16           Winning Sales         13         4         4         5           Losing Sales         5         4         4         3           Transaction Dates and Types         IWM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/27/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/22/01 S         04/22/02 S         09/16/02 S           03/12/01 B         04/16/01 B         07/15/02 B         09/23/02 B           06/18/01 S         06/11/01 S         09/23/02 S         01/21/01 S           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B	Max Draw Down Date	03/02/09	09/30/02	03/02/09	03/02/09		
Opt Return         173.325%         58.173%         132.451%         194.450%           Opt Drawdown         -58.821%         -78.472%         -54.354%         -52.322%           Total Trades with Opt Strategy         36         16         16         16           Winning Sales         13         4         4         5           Losing Sales         5         4         4         3           Transaction Dates and Types         IVVM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/27/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/22/01 S         04/16/01 B         07/15/02 B           03/12/01 B         04/16/01 B         07/15/02 B         09/23/02 B           06/18/01 S         06/11/01 S         09/23/02 S         01/21/03 S           09/10/01 B         10/15/01 B         02/20/03 B         02/20/03/03 B           01/14/02 S         01/14/02 S         01/14/02 S         01/21/03 S           09/10/01 B         10/21/02 B         01/14/08 B         01/14/08 B	Opt Sell	4.000%	6.000%	8.000%	8.000%		
Opt Drawdown         -58.821%         -78.472%         -54.354%         -52.322%           Total Trades with Opt Strategy         36         16         16         16           Winning Sales         13         4         4         5           Losing Sales         5         4         4         3           Transaction Dates and Types         IWM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/127/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/22/01 B         04/16/01 B         07/15/02 S           03/12/01 B         04/16/01 B         07/15/02 S         09/23/02 S           06/18/01 S         06/11/01 S         09/23/02 S         01/21/03 S           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           01/14/02 S         01/14/02 S         12/31/07 S         12/31/07 S           06/10/02 B         10/21/02 B         01/14/08 B         01/14/08 B           07/08/02 B<	Opt Buy	-8.000%	11.000%	-10.000%	-10.000%		
Total Trades with Opt Strategy         36         16         16         16           Winning Sales         13         4         4         5           Losing Sales         5         4         4         3           Transaction Dates and Types         IWM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/27/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/29/01 S         04/22/02 S         09/16/02 S           03/12/01 B         04/16/01 B         07/15/02 B         09/23/02 S           06/18/01 S         06/11/01 S         09/23/02 S         01/21/03 S           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           01/14/02 S         01/14/02 S         12/31/07 S         12/31/07 S           06/10/02 B         10/21/02 B         01/14/08 B         01/14/08 B           07/01/02 S         12/20/902 S         06/23/08 S         06/18/08 S           07/08/02 B         05/05/03 B         09/29/08 B         10/06/08 B           07/08/02 S         03/08	Opt Return	173.325%	58.173%	132.451%	194.450%		
Winning Sales         13         4         4         5           Losing Sales         5         4         4         3           Transaction Dates and Types         IWM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/1/07/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/29/01 S         04/22/02 S         09/16/02 S           03/12/01 B         04/16/01 B         07/15/02 B         09/23/02 S           06/18/01 S         06/11/01 S         09/23/02 S         01/21/03 S           09/10/01 B         10/15/01 B         02/20/303 B         02/03/03 B           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           01/14/02 S         01/14/02 S         12/31/07 S         12/31/07 S           06/10/02 B         10/21/02 B         01/14/08 B         01/14/08 B           07/08/02 B         05/05/03 B         09/29/08 B         10/06/08 B           08/05/02 S         03/08/04 S	Opt Drawdown	-58.821%	-78.472%	-54.354%	-52.322%		
Losing Sales         5         4         4         3           Transaction Dates and Types         IWM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/127/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/29/01 S         04/22/02 S         09/16/02 S           03/12/01 B         04/16/01 B         07/15/02 B         09/23/02 B           06/18/01 S         06/11/01 S         09/23/02 S         01/21/03 S           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           01/14/02 S         01/14/02 S         12/31/07 S         12/31/07 S           06/10/02 B         10/21/02 B         01/14/08 B         01/14/08 B           07/01/02 S         12/09/02 S         06/23/08 S         06/16/08 S           07/08/02 B         05/05/03 B         09/29/08 B         10/06/08 B           08/05/02 S         03/08/04 S         11/03/08 S         11/10/08 S	Total Trades with Opt Strategy	36	6 16	16	16		
Transaction Dates and Types         IWM         QQQQ         SPY         DIA           10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/27/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/29/01 S         04/22/02 S         09/16/02 S           03/12/01 B         04/16/01 B         07/15/02 B         09/23/02 B           06/18/01 S         06/11/01 S         09/23/02 S         01/21/03 S           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           01/14/02 S         01/14/02 S         12/31/07 S         12/31/07 S           06/10/02 B         10/21/02 B         01/14/08 B         01/14/08 B           07/01/02 S         12/09/02 S         06/23/08 S         06/16/08 S           07/08/02 B         05/05/03 B         09/29/08 B         10/06/08 B           08/05/02 S         03/08/04 S         11/03/08 S         11/10/08 S	Winning Sales	13	6 4	4	5		
10/02/00 B         08/21/00 B         03/12/01 B         09/10/01 B           11/06/00 S         09/05/00 S         08/13/01 S         06/03/02 S           11/27/00 B         01/22/01 B         09/10/01 B         07/15/02 B           02/20/01 S         01/29/01 S         04/22/02 S         09/16/02 S           03/12/01 B         04/16/01 B         07/15/02 B         09/23/02 S           06/18/01 S         06/11/01 S         09/23/02 S         01/21/03 S           09/10/01 B         10/15/01 B         02/03/03 B         02/03/03 B           01/14/02 S         01/14/02 S         12/31/07 S         12/31/07 S           06/10/02 B         10/21/02 B         01/14/08 B         01/14/08 B           07/01/02 S         12/09/02 S         06/23/08 S         06/16/08 S           07/08/02 B         05/05/03 B         09/29/08 B         10/06/08 B           08/05/02 S         03/08/04 S         11/03/08 S         11/10/08 S	Losing Sales	5	4	4	3		
12/09/02 S01/20/09 S02/17/09 S02/17/09 S02/03/03 B03/23/09 B02/23/09 B02/23/09 B	Transaction Dates and Types	10/02/00 11/06/00 11/27/00 02/20/01 03/12/01 06/18/01 09/10/01 01/14/02 06/10/02 07/01/02 07/01/02 07/08/02 08/05/02 09/30/02 12/09/02	S B S B S B S S B S S B S S B S S B S S B S S S S S S S S S S S S S S S S S S S S	08/21/00 09/05/00 01/22/01 04/16/01 06/11/01 10/15/01 01/14/02 10/21/02 12/09/02 05/05/03 03/08/04 12/15/08 01/20/09	S B S B S B S B S B S B S S S S S S S S	03/12/01 B 08/13/01 S 09/10/01 B 04/22/02 S 07/15/02 B 09/23/02 S 02/03/03 B 12/31/07 S 01/14/08 B 06/23/08 S 09/29/08 B 11/03/08 S 01/26/09 B 02/17/09 S	09/10/01 B 06/03/02 S 07/15/02 B 09/16/02 S 09/23/02 B 01/21/03 S 02/03/03 B 12/31/07 S 01/14/08 B 06/16/08 S 10/06/08 B 11/10/08 S 01/26/09 B 02/17/09 S
		08/04/03	S	10/26/09	S	10/26/09 S	10/26/09 S



### WEEKLY TRAILING STOP TABLES

				BUY	VALUES																		
	IVVM	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
		36.32183			21.58677	-6.53259		-10.8617	-36.4392	-19.6946	-27.3799	-4.33094	21.13896	-10.0885				17.54814			12.69564	9.18158	
SELL	-0.01	38,98899	37.11932		25.04385		2.599375	-5.89372	-38,1013	-23.341	-31.7609	-8.02179	17.15888	-10.23	8.158005	29.49279	28.16386		-1.37615	2.927162	6.900976		
VALUES	-0.02		53.35374	99.08552	53.82365		4.146867	-3.29213	-40.1431	-26.6872	-41.7391	-29.1434	15,5596	12.30563		80.95706	70.41996			32.38666	42.31304	41 38283	39,88605
1712020	-0.03								-48,1848	-17.5034	-24.1179		14.39924		46.48066	69,9607	62.68898		31.51472		32.2415	26.94221	32.29613
	-0.04		132,8688	173.3251		104.07	62.21422		-42,9391	-25.3425	-21.9024	-20,7109	13.92083	27.79113				60.27739				31.05871	26.25242
	-0.05	58,49221	94 6541	120.3429				4.49809	-13.3085	-17.2822	-24.7456	-19.7344	32,71132					36 9242		26.2723	42,75968	38,71588	35.21825
	-0.06		31.09437	46,93173			-8.43087		-28.8808	-16,4445	-26.8411	-19.5792		5.416247		-0.59646	3.728215	-2.27988	-9.10253	-3.83646	14.00479	27.5633	32,39899
	-0.07	5.668021	54.37458	77.55883	32.06899	29.52889	33.76275	23.22	-8.55725	-28.292	-33.3446	-23.3031		34.06135		27.84089		27.64602		28.15159	43.9372	61.05555	59,99683
	-0.08	-3.20656	-9.54439	-2.34011	-29.2043	-24.0788			-40.7098	-30.4333	-34.2035		11.19807	1.761961	-2.9423	-1.01437	15,4421	10.23077	4.55686	20.86314	16.90421	35.24005	40.0776
	-0.09	-3.91478	-10.2062	-2.34011	-29.2043	-13.4623	-1.5032	-3.81468	-38.5766	-13.5467	-28.3443	10.48813	10.38446	1.017395	-3.65245	-1.73862	14.59744	9.42424	3.791844	19.97881	16.90421	35.24005	40.0776
	-0.1	15.53873	10.32109	2.989621	13.5973	-11.4398	8.12803	21.02522	-22.4393	9.166423	-10.1539	24.282	13.187	9.383356	4.326767	10.62445	29.01589	23.1918	10.78239	32.79587	31.52557	52.15469	57.59728
	-0.11	8.718261	3.685464	-3.13906	9.823107	-6.25574	5.581186	18.17459	-24.2662	9.166423	-10.1539	24.282	38.50934	33.85474	27.75397	30.06512	36.32032	19.06363	8.771037	40.88666	57.58294	74.60983	50.14945
	-0.12	-0.51705	-3.09027	20.61568	-11.4149	-29.982	-33.0523	-13.8855	-24.6925	5.481401	-14.6328	14.47647	37.59625	35.20213	29.03995	35.83447	38.57509	21.03297	-1.2138	23.15369	37.74845	52.63223	34.95395
	-0.13	-1.50947	-6.0404	15.59764	-12.4347	10.40094	5.559971	9.503464	-4.23869	34.13048	26.20085	17.86408	43.0999	40.61001	34.20136	42.01951	44.88492	38.05137	26.38039	40.47028	57.11721	76.53543	34.95395
	-0.14	86.61546	110.9285	106.2327	25.38729	21.55776	18.11167	14.41417	0.055738	28.0766	20.50486	14.74062	51.16585	51.16585	44.27608	44.59307	47.5104	45.99592	46.86371	68.16697	61.71838	81.70526	66.86347
	-0.15	81.76214	72.20397	68.37026	25.38729	15.38365	18.11167	22.88103	21.26351	21.59447	14.40595	14.74062	37.40427	37.40427	31.14173	31.42985	34.08161	32.705	33.49379	52.85768	46.99614	65.16349	51.67284
	-0.16	81.76214	64.0362	60.38432	20.63158	15.38365	14.14033	18.30935	30.01963	32.43691	24.6074	24.97191	40.52486	40.52486	34.12008	30.98694	33.62976	28.64788	32.92615	52.85768	46.99614	65.16349	51.67284
	-0.17	96.58172	87.53823	83.36314	36.55266	33,16756	14.14033	18.30935	30.01963	32.43691	24.6074	24.97191	12.53697	12.53697	7.407811	4.898685	7.015141	3.025488	6.451669	22.4135	17.71939	58,1169	45.20182
	-0.18	94.31027	85.37127	81.24442	34.97482	31.62884	7.915287	13.16557	24.36672	28.018	20.44973	15.48139	12.53697	12.53697	7.407811	4.898685	7.015141	3.025488	4.506495	22.4135	17.71939	58,1169	45.20182
	-0.19	17.90324	12.47925	36.39763	29.28263	26.07776	-4.03511	13.16557	24.36672	28.018	20.44973	23,16759	5.142192		0.350072		-0.0168			16.4985	12.03121	50.47672	38,18569
	-0.2	17.90324	12.47925	36.39763	29.28263	26.07776	-4.03511	13.16557	24.36672	30.90663	23.16759	23,16759	10.6379	10.6379	5.595295	5.827294	7.962485	7.962485	11.55285	16,4985	12.03121	50.47672	38.18569
					VALUES																		
	QQQQ	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
0511	0		-27.5697	-44.3603	-43.0858		-49.5309	-49.6251	-38.4984	-31.6328	-31.4874	-36.2941	-26.0275	-21.8501	-30.3837	-28.0522	-36.269	-26.6778			4.365004		20.9285
SELL	-0.01	-20.8085	-26.6832	-43.6793			-55.4717	-50.134	-38.3721	-38.2908	-37.1722	-40.0497	-26.862	-25.8919		-33.144	-31.7175			-19.3007	1.695785	8.931806	
VALUES	-0.02	-33.2243	-35.2444	-44.7398			-42.9012	-33.8444	-24.5203	-28.3935	-37.3423			-20.9968		-29.9452	-25.3624		-19.58	-22.6359		0.789742	13.07378
	-0.03	-18.3172	-18.8731 -27.9773	-28.3306 -36.3735	-37.4962 -32.8563		-30.6411	-14.658	-26.7265	-25.9934	-26.7278	-40.6977 -48.0875	-14.8035		-16.7659	-5.41914			-4.50137		3.572654		33.35447 32.47977
	-0.04	-27.4030	-27.9773	-36.3735			-23.1497 -35.9705	3.967158 -38.818	-19.5207 -30.8999	-1.15169	-15.6516	-40.0075		7.055303		9.025329	0.365047		5.498343	0.693855			43.11568
	-0.05	-22.5236		-35.5653		-34.3886		-30.010	-23.0939	-22.0912	-25.7461				11.61563	-4.62498		7.326065				47 76004	58,17263
	-0.00	-22.0996	-18.0856	-41.9423	-42.113		-35.4052	-25.2025	-4.66516	-16.4329	-28.4448	-49.0599		23.55747	21.23495					15.6464		31 54710	44 79655
	-0.07	-20.9652	-26.9417	-35.0659		-24.3527	-11.0609	-21.7363	-28.2233	-27.0921	-37.5718		23.14493	13.6802					33.82844		6.406241	16 /3705	28.16452
	-0.00	-22.934	-37.8481	-38.3029	-35.9467	-24.3327	-18.5901	-16.7031	-32.0675	-30,9968	-41.5926	-54.9528			0.954527	-2.58787	-9.52811		5.551423			10.41606	21.5371
	-0.1	-23.1078	-49.147					-27.5118		-31.5948	-42.0988	-57.7644			-1.42136		-11.0189		-8.70604	-21.4701	-19.5212		
	-0.11	-27.2431	-48.7783	-54.771	-39,984		-33.0086	-43.9817	-45.3066	-46.7731	-52.5727	-60.9192	17.90946		13,76128	9.76951	2.685561			-7.77622	-25.9735		
		21.2101											2.969686										
	-0.12	-36 4305	-35 5254	-35 9597	-28 4271	-25 3762	-29 9347	-47 5914	-26 2927	-25.3747	-40 68461	-5h UZ 54		1 250.524		-4 1.5000	- 111.525.51	-15 105/1	-1989.15	-17 4128	-337087	-00/5/5	5779415
	-0.12		-35.5254 -38.3941	-35.9597 -38.809	-28.4271 -38.5584		-29.9347 -37.66	-47.5914	-26.2927	-25.3747 -41.8592	-40.6846 -43.5948	-56.0734 -58.6123		1.250324		-4.13888 -8.90184	-10.3253		-3.98935 -5.17466	-17.4128		-8.82575	
	-0.12 -0.13 -0.14	-36.4305 -39.2589 -37.1858	-35.5254 -38.3941 -37.3572	-35.9597 -38.809 -37.7503	-28.4271 -38.5584 -39.7154	-35.2173	-29.9347 -37.66 -39.785	-47.5914 -41.2662 -43.0195	-26.2927 -42.5745 -44.2887	-25.3747 -41.8592 -43.5948	-40.6846 -43.5948 -43.5948	-58.6123 -58.587	-5.07462		-8.41419	-4.13888 -8.90184 -19.3574	-10.3253 -11.4323 -21.5974	-15.1057 -16.1537 -25.7769	-5.17466	-17.2429			1.072964
	-0.13	-39.2589	-38.3941	-38.809	-38.5584	-35.2173 -37.4255	-37.66	-41.2662	-42.5745	-41.8592	-43.5948	-58.6123	-5.07462	-6.65966	-8.41419	-8.90184	-11.4323	-16.1537 -25.7769	-5.17466 -19.6782	-17.2429	-39.6016	-12.8824	1.072964 -10.6371
	-0.13 -0.14	-39.2589 -37.1858	-38.3941 -37.3572	-38.809 -37.7503	-38.5584 -39.7154	-35.2173 -37.4255	-37.66 -39.785	-41.2662 -43.0195	-42.5745 -44.2887	-41.8592 -43.5948	-43.5948 -43.5948	-58.6123 -58.587	-5.07462 -15.9694	-6.65966 -17.3725	-8.41419 -18.9257	-8.90184 -19.3574	-11.4323 -21.5974	-16.1537 -25.7769	-5.17466 -19.6782 -21.9814	-17.2429 -29.9006	-39.6016 -48.8395	-12.8824 -24.2533 -17.7949	1.072964 -10.6371 -3.01776
	-0.13 -0.14 -0.15	-39.2589 -37.1858 -47.0393	-38.3941 -37.3572 -50.2478	-38.809 -37.7503 -53.1166	-38.5584 -39.7154 -45.973 -44.4267	-35.2173 -37.4255 -24.5288 -32.2704	-37.66 -39.785 -27.8823	-41.2662 -43.0195 -33.0412	-42.5745 -44.2887 -34.4247	-41.8592 -43.5948 -33.6079	-43.5948 -43.5948 -33.6079	-58.6123 -58.587 -51.2546	-5.07462 -15.9694 -14.4765	-6.65966 -17.3725 -12.3941	-8.41419 -18.9257 -16.1468	-8.90184 -19.3574 -25.8454	-11.4323 -21.5974 -27.9053	-16.1537 -25.7769 -27.9053 -26.1392	-5.17466 -19.6782 -21.9814 -23.4293	-17.2429 -29.9006 -29.1305	-39.6016 -48.8395 -48.0332	-12.8824 -24.2533 -17.7949	1.072964 -10.6371 -3.01776
	-0.13 -0.14 -0.15 -0.16	-39.2589 -37.1858 -47.0393 -43.6795 -24.3628	-38.3941 -37.3572 -50.2478 -43.8008	-38.809 -37.7503 -53.1166 -48.301	-38.5584 -39.7154 -45.973 -44.4267 -34.1509	-35.2173 -37.4255 -24.5288 -32.2704 -37.9171	-37.66 -39.785 -27.8823 -33.9122	-41.2662 -43.0195 -33.0412 -38.6397	-42.5745 -44.2887 -34.4247 -39.9075	-41.8592 -43.5948 -33.6079 -39.159	-43.5948 -43.5948 -33.6079 -39.159	-58.6123 -58.587 -51.2546 -55.3303	-5.07462 -15.9694 -14.4765 -14.8153 -13.3323	-6.65966 -17.3725 -12.3941 -12.7412	-8.41419 -18.9257 -16.1468 -16.479	-8.90184 -19.3574 -25.8454 -26.1392	-11.4323 -21.5974 -27.9053 -26.1392	-16.1537 -25.7769 -27.9053 -26.1392 -15.7438	-5.17466 -19.6782 -21.9814 -23.4293 -12.6525	-17.2429 -29.9006 -29.1305 -23.4293	-39.6016 -48.8395 -48.0332 -43.972 -12.6525	-12.8824 -24.2533 -17.7949 -18.8509	1.072964 -10.6371 -3.01776 0.279142
	-0.13 -0.14 -0.15 -0.16 -0.17 -0.18	-39.2589 -37.1858 -47.0393 -43.6795 -24.3628	-38.3941 -37.3572 -50.2478 -43.8008 -28.5641	-38.809 -37.7503 -53.1166 -48.301 -37.4849	-38.5584 -39.7154 -45.973 -44.4267 -34.1509 -45.1802	-35.2173 -37.4255 -24.5288 -32.2704 -37.9171	-37.66 -39.785 -27.8823 -33.9122 -33.9122 -40.9976	-41.2662 -43.0195 -33.0412 -38.6397 -40.33	-42.5745 -44.2887 -34.4247 -39.9075 -41.5629	-41.8592 -43.5948 -33.6079 -39.159 -40.835	-43.5948 -43.5948 -33.6079 -39.159 -40.835 -40.835	-58.6123 -58.587 -51.2546 -55.3303 -56.5608 -56.5608	-5.07462 -15.9694 -14.4765 -14.8153 -13.3323 -30.7741	-6.65966 -17.3725 -12.3941 -12.7412 -0.46009 -17.8024	-8.41419 -18.9257 -16.1468 -16.479 -4.72402	-8.90184 -19.3574 -25.8454 -26.1392 -15.7438	-11.4323 -21.5974 -27.9053 -26.1392 -15.7438 -30.4233	-16.1537 -25.7769 -27.9053 -26.1392 -15.7438 -30.4233	-5.17466 -19.6782 -21.9814 -23.4293 -12.6525	-17.2429 -29.9006 -29.1305 -23.4293 -12.6525 -27.8706	-39.6016 -48.8395 -48.0332 -43.972 -12.6525 -27.8706	-12.8824 -24.2533 -17.7949 -18.8509 17.13397	1.072964 -10.6371 -3.01776 0.279142 44.74708
	-0.13 -0.14 -0.15 -0.16 -0.17 -0.18 -0.19	-39.2589 -37.1858 -47.0393 -43.6795 -24.3628 -27.6134 -27.6134	-38.3941 -37.3572 -50.2478 -43.8008 -28.5641 -39.3231 -39.3231	-38.809 -37.7503 -53.1166 -48.301 -37.4849 -47.9558 -47.9558	-38.5584 -39.7154 -45.973 -44.4267 -34.1509 -45.1802 -45.1802	-35.2173 -37.4255 -24.5288 -32.2704 -37.9171 -45.1802 -45.1802	-37.66 -39.785 -27.8823 -33.9122 -33.9122 -40.9976	-41.2662 -43.0195 -33.0412 -38.6397 -40.33 -40.33 -40.33	-42.5745 -44.2887 -34.4247 -39.9075 -41.5629 -41.5629 -41.5629	-41.8592 -43.5948 -33.6079 -39.159 -40.835 -40.835 -40.835	-43.5948 -43.5948 -33.6079 -39.159 -40.835 -40.835 -40.835	-58.6123 -58.587 -51.2546 -55.3303 -56.5608 -56.5608 -56.5608	-5.07462 -15.9694 -14.4765 -14.8153 -13.3323 -30.7741 -30.7741	-6.65966 -17.3725 -12.3941 -12.7412 -0.46009 -17.8024 -17.8024	-8.41419 -18.9257 -16.1468 -16.479 -4.72402 -21.3234	-8.90184 -19.3574 -25.8454 -26.1392 -15.7438 -30.4233 -30.4233	-11.4323 -21.5974 -27.9053 -26.1392 -15.7438 -30.4233 -30.4233	-16.1537 -25.7769 -27.9053 -26.1392 -15.7438 -30.4233 -30.4233	-5.17466 -19.6782 -21.9814 -23.4293 -12.6525 -27.8706 -28.2941	-17.2429 -29.9006 -29.1305 -23.4293 -12.6525 -27.8706 -28.2941	-39.6016 -48.8395 -48.0332 -43.972 -12.6525 -27.8706 -28.2941	-12.8824 -24.2533 -17.7949 -18.8509 17.13397 9.814967	1.072964 -10.6371 -3.01776 0.279142 44.74708 35.7027 35.7027



## **MONTHLY TRAILING STOP RESULTS**

	<b>Sell Methoc</b> TS	I Buy Meth 1 month %		Start Date 6/10/00	•		
Ticker	IWM	QQQQ		SPY	DIA		
Std Dev in Period	5.992	%	8.288%	4.641%	4.453%		
Mean Return	0.388	%	-0.355%	-0.060%	0.184%		
Buy & Hold Return	25.894	%	-54.925%	-17.227%	9.849%		
Max Buy & Hold Draw Down	-52.723	%	-79.612%	-50.782%	-47.527%		
Max Draw Down Date	02/02/0	9	09/03/02	02/02/09	02/02/09		
Opt Sell	2.000	%	13.000%	10.000%	11.000%		
Opt Buy	5.000	%	11.000%	-10.000%	-9.000%		
Opt Return	143.092	%	42.887%	124.289%	98.913%		
Opt Drawdown	-58.821	%	-78.472%	-54.354%	-52.322%		
Total Trades with Opt Strategy	2	24	10	6	8		
Winning Sales		7	2	2	2		
Losing Sales		5	3	1	2		
Transaction Dates and Types	IWM			QQQQ		SPY	DIA
	08/01/0	00 B		08/01/00	В	09/03/02 B	09/04/01 B
	09/01/0	00 S		10/02/00	S	01/02/08 S	07/01/02 S
	12/01/0	00 B		04/02/01	В	10/01/08 B	09/03/02 B
	02/01/0	)1 S		08/01/01	S	01/02/09 S	07/01/08 S
	04/02/0	)1 B		10/01/01	В	02/02/09 B	10/01/08 B
	07/02/0	)1 S		02/01/02	S	10/01/09 S	01/02/09 S
	10/01/0	)1 B		10/01/02	В		02/02/09 B
	02/01/0	)2 S		01/02/08	S		10/01/09 S
	03/01/0	)2 B		04/01/09	В		
	05/01/0	)2 S		10/01/09	S		
	11/01/0	)2 B					
	12/02/0	2 S					
	04/01/0	3 B					
	04/01/0	04 S					
	09/01/0	04 B					
	01/03/0						



1

ANAVA

Capital Management LLC

				BUY	VALUES																		
	IWM	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.1
		66.77785	11.53771	18.76639	-7.3496	-16.3597	-20.5136	-27.1004	-24.1903	-45.8115	-17.673	-29.8559		95.50828	80.38969	88.80626	116.787	88.65121				48.64872	
SELL	-0.01	48.63086	-0.59864	3.495425	-19.2626			-31.377	-20.705	-38.242		-29.8559	113.7748	120.0234	103.0091	112.481	140.4625					48.64872	
VALUES	-0.02	48.63086	-0.59864	3.495425	-19.2626		-25.1765	-31.377	-20.705 -28.6612	-44.9866 -40.2028	-15.7564	-32.6149 -39.7663	116.1127	122.4296	105.2292	114.8047		98.68958			68.42804	71.45969	21.1442
	-0.03	48.63086	-0.59864 3.03204	3.495425	-19.2626 -16.3136		-40.0344	-48.7079 -31.9885	-28.6612	-40.2028	-24.697 -26.8279	-39.7663	96.0532 101.3546	113.8827	97.34324	106.5508	133.7514	91.05489			68.42804 68.42804	71.45969	21.1442
	-0.04	45.11606		3.340517	-19.3834	-16.899	-40.0344	-31.9885	-24.3003	-40.2028		-13.9142	101.3340	104.3491	88.54685		123.3321	82 5388		52,70532	66.34021	71.45969	21.1442
	-0.06	45.11606	35.68529	41.47924	10.36884	7.33443		0.855931	-2.03172		8.030997	33,18346		93.22146			105.195	80.59571	52.54576	32.6565		70.17965	21.1442
	-0.07	45.11606	29.38766	34.91269	5.246234	7.33443	-11.0754	0.855931	-2.03172	-14.2643	14.03495	29.95918	80.31963	80.31963	74.53972	82.68334	92.72762	69.62296	43.27728	24.59646	53.41594	67.61957	21.1442
	-0.08	31.10711	-16.3878	-15.4256	2.097712	-2.94245		-31.5796	-12.8822	-14.2643		29.95918			34,49468			26.54147				67.61957	21.1442
	-0.09	32.61591	-15.4256	-15.4256	2.097712		3.711821	-5.28722		-1.13624		29.95918						64.58531				80.09175	21.1442
	-0.1 -0.11	32.61591	-15.4256 -21.2376	-15.4256	2.097712	-2.94245 94.59739	-3.32613	-11.7145		-8.60883	5.415643 40.27587	29.95918	0.121192	2.066233	2.066233	2.066233	53.82506 56.8134	53.82506 56.8134		25.51242	80.09175	400.09175	21.1442
	-0.11		47 51892	47 51892	78 0839	72 8657	62,83888	38.08488	36.72295 36.72295		40.27567		2.066233			2.000200	69 76554				128,5035	128,5035	21.1442
	-0.12	23.50244	47.51892	47.51892	78.0839	72.8657	62.83888	38.08488	36,72295	40.27587	40.27587	27.80219						69.76554			128,5035	128,5035	21.1442
	-0.14	23.50244	47.51892	47.51892	78.0839	72.8657	46.45282	38.08488		40.27587	40.27587	27.80219	10.49648	10.49648	10.49648	10.49648	69.76554	69.76554	89.60679	90.30508	128.5035	128.5035	21.1442
	-0.15	23.50244	47.51892	47.51892	78.0839	72.8657	46.45282	38.08488	36.72295	40.27587	40.27587	23.58893	10.49648	10.49648	10.49648	10.49648	69.76554	69.76554	89.60679	90.30508	128.5035	128.5035	21.1442
	-0.16	23.50244	43.19633		72.8657	72.8657	46.45282	38.08488	36.72295		40.27587	23.58893		7.258723	7.258723	7.258723		64.79109			121.8079	121.8079	
	-0.17		-29.3113			74.64972			50.19128	40.27587	40.27587	23.58893		15.85865	15.85865	15.85865			0		121.8079	121.8079	21.1442
	-0.18 -0.19	-22.2444	-29.3113 -29.3113		73.20249	73.20249	73.20249	55.92495	48.94673	40.27587	40.27587	23.58893		14.89859	14.89859	14.89859	76.52889	76.52889			119.9699	72 40460	21.1442
	-0.19						75.11491	57.6466			55.79563												
	0.2	22.2111	20.0110	10.11401	10.11401	10.11401	10.11401	01.0400	00.00102	00.10000	00.10000	40.11001	20.12140	20.121.40	20.121.40	20.121.40	00.20100	00.20100	10.00112	11.10101	10.10102	10.10102	
				BUY	VALUES																		
	QQQQ	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.1
0511		-46.3643	-53.7706	-60.0568	-66.9511	-67.1298	-57.2883	-47.0339	-47.6109	-42.6231	-23.6046	-41.0367	-2.75203	8.308326	7.642876	4.715579	-5.8516	-15.9952	0.717835	14.54839	-3.55441	-3.55441	15.6133
SELL VALUES	-0.01	-46.3643 -46.3643	-53.7706 -53.7706	-60.0568 -60.0568	-68.3749 -68.3749		-64.6218 -64.6218	-56.128 -40.6761	-56.606 -37.9725	-53.9296 -35.4781	-38.6186 -28.2324	-42.0297 -45.6023	-7.24349 8.828839	3.306039	16.51027	13.34183	1.904151	-15.9952 -12.313	0.717835	14.54839	-3.55441 -4.54738	-3.55441 -4.54738	15.6133
VALUES	-0.02	-48.0117	-55.1905	-61.2836	-65.9783		-64.8210	-40.0701	-26.5941	-34,5404	-20.2324	-43.0023	0.020039		19.12508	13.42405	-4.29612				-4.547.50	-4.547.50	-
	-0.04	-48.0117	-55.1905	-61.2836	-65.9783		-61.2634	-13.255	-19.0314	-27.7963		-47.273	6.825301	17.19781	16.07429	10.51926	-6.7471	-23.1269		1.379198	-21.8357	-21.8357	
	-0.05	-45.2434	-44.8897	-52.3835	-41.9113	-42.2253	-24.9275	-13.255	-19.0314	-27.7963	-16.0215	-47.273	6.825301	17.19781	16.07429	10.51926	-6.7471	-23.1269	-9.49031	1.379198	-21.8357	-21.8357	-6.3011
	-0.06	-48.8896	-48.5595	-55.5543	-45.7794	-46.0726		-19.0314	-19.0314	-27.7963	-16.0215	-47.273	6.825301	17.19781	16.07429	10.51926	-6.7471	-23.1269		1.379198	-21.8357	-21.8357	-6.3011
	-0.07	-48.8896	-48.5595	-55.5543	-62.0457	-62.0457	-50.682	-41.9445	-41.9445	-40.7964	-34.1479	-43.3439		6.082206	5.065245	0.03708	-15.5917	-33.5843			-21.8357	-21.8357	-6.3011
	-0.08	-61.2277 -61.2277	-60.9773 -60.9773	-65.7409 -65.7409	-62.0457 -63.7027	-62.0457 -63.7027	-50.682 -52.8352	-44.4456 -46.8711	-44.4456 -46.8711	-43.3469 -45.8204	-44.5431 -44.5431	-44.5431 -44.5431	-0.52782 -4.87073	9.130718	-2.02718 -6.30463	-6.71592 -10.7887	-21.2896 -24.7261	-38.0677 -40.7716	-25.439 -25.439		-21.8357 -21.8357	-21.8357 -21.8357	-6.3011 -6.3011
	-0.09	-70.6023	-70.6023	-74.1248	-63.7027		-52.8352	-46.8711	-46.8711	-45.8204	-44.5431	-44.5431	-4.07073	-18,4914	-26.8251	-10.7867	-24.7261	-40.7716	-41.4795	-5.12536	-31.4307	-31.4307	-0.3011
				-14.1240	-0r.50r5	-01.0010	-32.0332	-40.0711	-40.0711								-38.2572						
	-0.11	-70.6023	-70.6023	-74.1248	-67.9879	-67.9879	-52.8352	-46.8711	-46.8711	-45.8204	-44.5431	-44.5431	-11.979	-18.4914	-26.8251	-26.8251	-30.297ZI	-48.4986	-41.4795	-13.61	-31.4307	-31.4307	-17.803
		-70.6023 -62.5957	-70.6023 -62.5957	-74.1248 -62.5957	-67.9879 -54.2762	-67.9879 -54.2762	-52.8352 -32.6331	-46.8711 -24.1143	-46.8711 -24.1143	-45.8204 -28.1249		-44.5431 -44.5431	-11.979	-18.4914	-26.6251	-26.6251	-30.2572	-48.4986			-31.4307 -31.4307	-31.4307 -31.4307	
	-0.11	-62.5957 -46.337	-62.5957 -53.7471	-62.5957 -53.7471	-54.2762 -49.051	-54.2762 -49.051	-32.6331 -24.9346			-28.1249 -28.1249	-44.5431 -44.5431	-44.5431 -44.5431	-12.7022 -9.66567	-19.1611 -16.3493					-12.8819 -1.64288	5.577269 19.19765	-31.4307		-17.803
	-0.11 -0.12 -0.13 -0.14	-62.5957 -46.337 -46.337	-62.5957 -53.7471 -53.7471	-62.5957 -53.7471 -53.7471	-54.2762 -49.051 -49.051	-54.2762 -49.051 -49.051	-32.6331 -24.9346 -24.9346	-24.1143 -24.1143 -24.1143	-24.1143 -24.1143 -24.1143	-28.1249 -28.1249 -28.1249	-44.5431 -44.5431 -44.5431	-44.5431 -44.5431 -44.5431	-12.7022 -9.66567 -9.66567	-19.1611 -16.3493 -16.3493	-27.4264 -18.0638 -18.0638	-27.4264 -18.0638 -18.0638	-27.4264 -18.0638 -18.0638	-27.4264 -18.0638 -18.0638	-12.8819 -1.64288 -1.64288	5.577269 19.19765 19.19765	-31.4307 19.19765 19.19765	-31.4307	-17.803 42.8872 42.8872
	-0.11 -0.12 -0.13 -0.14 -0.15	-62.5957 -46.337 -46.337 -46.337	-62.5957 -53.7471 -53.7471 -53.7471	-62.5957 -53.7471 -53.7471 -53.7471	-54.2762 -49.051 -49.051 -49.051	-54.2762 -49.051 -49.051 -49.051	-32.6331 -24.9346 -24.9346 -24.9346	-24.1143 -24.1143 -24.1143 -24.1143	-24.1143 -24.1143 -24.1143 -24.1143	-28.1249 -28.1249 -28.1249 -28.1249	-44.5431 -44.5431 -44.5431 -44.5431	-44.5431 -44.5431 -44.5431 -44.5431	-12.7022 -9.66567 -9.66567 1.84427	-19.1611 -16.3493 -16.3493 -5.6909	-27.4264 -18.0638 -18.0638 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385	-12.8819 -1.64288 -1.64288 -7.62385	5.577269 19.19765 19.19765 11.94939	-31.4307 19.19765 19.19765 11.94939	-31.4307 19.19765	-17.803 42.8872 42.8872 34.1984
	-0.11 -0.12 -0.13 -0.14 -0.15 -0.16	-62.5957 -46.337 -46.337 -46.337 -46.337	-62.5957 -53.7471 -53.7471 -53.7471 -53.7471	-62.5957 -53.7471 -53.7471 -53.7471 -53.7471	-54.2762 -49.051 -49.051 -49.051 -49.051	-54.2762 -49.051 -49.051 -49.051 -49.051	-32.6331 -24.9346 -24.9346 -24.9346 -24.9346	-24.1143 -24.1143 -24.1143 -24.1143 -24.1143	-24.1143 -24.1143 -24.1143 -24.1143 -24.1143	-28.1249 -28.1249 -28.1249 -28.1249 -28.1249	-44.5431 -44.5431 -44.5431 -44.5431 -44.5431	-44.5431 -44.5431 -44.5431 -44.5431 -44.5431	-12.7022 -9.66567 -9.66567 1.84427 1.84427	-19.1611 -16.3493 -16.3493 -5.6909 -5.6909	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385	-12.8819 -1.64288 -1.64288 -7.62385 -7.62385	5.577269 19.19765 19.19765 11.94939 11.94939	-31.4307 19.19765 19.19765 11.94939 11.94939	-31.4307 19.19765	-17.803 42.8872 42.8872 34.1984 34.1984
	-0.11 -0.12 -0.13 -0.14 -0.15 -0.16 -0.17	-62.5957 -46.337 -46.337 -46.337 -46.337 -46.3143	-62.5957 -53.7471 -53.7471 -53.7471 -53.7471 -53.7275	-62.5957 -53.7471 -53.7471 -53.7471 -53.7471 -54.425	-54.2762 -49.051 -49.051 -49.051 -49.051 -49.7977	-54.2762 -49.051 -49.051 -49.051 -49.051 -49.7977	-32.6331 -24.9346 -24.9346 -24.9346 -24.9346 -24.9346	-24.1143 -24.1143 -24.1143 -24.1143 -24.1143 -24.1143	-24.1143 -24.1143 -24.1143 -24.1143 -24.1143 -24.1143	-28.1249 -28.1249 -28.1249 -28.1249 -28.1249 -28.1249	-44.5431 -44.5431 -44.5431 -44.5431 -44.5431 -44.5431	-44.5431 -44.5431 -44.5431 -44.5431 -44.5431 -44.5431	-12.7022 -9.66567 -9.66567 1.84427 1.84427 1.84427	-19.1611 -16.3493 -16.3493 -5.6909 -5.6909 -5.6909	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385 -7.62385	-12.8819 -1.64288 -1.64288 -7.62385 -7.62385 -7.62385	5.577269 19.19765 19.19765 11.94939 11.94939 11.94939	-31.4307 19.19765 19.19765 11.94939 11.94939 11.94939	-31.4307 19.19765 19.19765 11.94939 11.94939 11.94939	-17.803 42.8872 42.8872 34.1984 34.1984 34.1984
	-0.11 -0.12 -0.13 -0.14 -0.15 -0.16	-62.5957 -46.337 -46.337 -46.337 -46.337	-62.5957 -53.7471 -53.7471 -53.7471 -53.7471	-62.5957 -53.7471 -53.7471 -53.7471 -53.7471	-54.2762 -49.051 -49.051 -49.051 -49.051	-54.2762 -49.051 -49.051 -49.051 -49.051	-32.6331 -24.9346 -24.9346 -24.9346 -24.9346 -24.9346 -24.9346	-24.1143 -24.1143 -24.1143 -24.1143 -24.1143 -24.1143 -24.1143	-24.1143 -24.1143 -24.1143 -24.1143 -24.1143 -24.1143 -24.1143	-28.1249 -28.1249 -28.1249 -28.1249 -28.1249 -28.1249 -28.1249	-44.5431 -44.5431 -44.5431 -44.5431 -44.5431 -44.5431 -44.5431	-44.5431 -44.5431 -44.5431 -44.5431 -44.5431	-12.7022 -9.66567 -9.66567 1.84427 1.84427	-19.1611 -16.3493 -16.3493 -5.6909 -5.6909	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385	-27.4264 -18.0638 -18.0638 -7.62385 -7.62385	-12.8819 -1.64288 -1.64288 -7.62385 -7.62385	5.577269 19.19765 19.19765 11.94939 11.94939	-31.4307 19.19765 19.19765 11.94939 11.94939 11.94939 6.550626	-31.4307 19.19765 19.19765 11.94939 11.94939 11.94939 6.550626	-17.803 42.8872 42.8872 34.1984 34.1984 34.1984 27.7266



## **DAILY PROTECT PROFITS RESULTS**

	Sell Method PP	<b>Buy Method</b> 5 day % Change	<b>Start Date</b> 5/26/00	Stop DatePeriod10/30/09day
Ticker	IWM	QQQQ	SPY	DIA
Std Dev in Period	1.675%	2.087%	1.405%	1.333%
Mean Return	0.027%	-0.004%	0.004%	0.014%
Buy & Hold Return	37.156%	-45.885%	-12.155%	13.613%
Max Buy & Hold Draw Down	-58.860%	-80.450%	-55.189%	-52.322%
Max Draw Down Date	03/09/09	10/09/02	03/09/09	03/09/09
Opt Sell	0.000%	2.000%	1.000%	10.000%
Opt Buy	-1.000%	-10.000%	-4.000%	-6.000%
Opt Return	122.524%	142.330%	81.477%	59.807%
Opt Drawdown	-50.936%	-30.470%	-38.608%	-37.432%
Total Trades with Opt Strategy	190	40	74	12
Winning Sales	94	20	36	5
Losing Sales	1	0	1	1

Transaction Dates and Types	IWM	QQQQ	SPY	DIA
	06/16/00 B	07/28/00 B	09/21/00 B	10/12/00 B
	06/19/00 S	07/31/00 S	09/22/00 S	02/01/01 S
	06/26/00 B	10/12/00 B	10/11/00 B	03/14/01 B
	06/30/00 S	10/13/00 S	10/16/00 S	05/16/01 S
	07/19/00 B	10/30/00 B	11/10/00 B	09/17/01 B
	08/28/00 S	10/31/00 S	11/14/00 S	11/13/01 S
	09/11/00 B	11/10/00 B	11/22/00 B	06/25/02 B
	09/13/00 S	11/14/00 S	11/24/00 S	10/13/03 S
	09/18/00 B	11/22/00 B	12/18/00 B	01/22/08 B
	09/25/00 S	11/24/00 S	01/03/01 S	05/02/08 S
	09/26/00 B	12/18/00 B	02/21/01 B	10/03/08 B
	09/28/00 S	01/18/01 S	02/26/01 S	10/30/09 S
	10/02/00 B	02/13/01 B	03/12/01 B	
	01/29/01 S	02/14/01 S	04/17/01 S	
	02/05/01 B	02/22/01 B	05/30/01 B	
	02/07/01 S	02/26/01 S	06/01/01 S	



# DAILY PROTECT PROFITS TABLES

				BUY	VALUES																		
	IWM	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
		7.144122		15.4359	16.45672		36.07518			92,94386	122,5239	29.0943	1.738603	-2.693	22.19446	-1.03935	-5.55206	24.01269	12,59492	4.50353	1.46784	1.46784	1.46784
SELL	_	9.897421	5.323559	17 30068	18 33799	28 54988				36.34278	49 84429	26.61514	7 89038	13,90396	8.085519	-7.80206	-1.01959	-6.00588	-20.1658	10 74892	7 939182	7 939182	7 939182
VALUES		-0.69744	5.323559	17.30068	32.07568	38,74341	88,71896	61.60454	46.97722	63,6616	59.11006	30.77562	13,79181	7.108509	44.01779	-3.43882	6.715599	0.878737	-19,4018	13.05341	11.70443	11,70443	11.70443
	0.03	0.702983	9.537838	22.51429	40.27014	16.67678	24.29494	37.46399	62.75847	75.52626	61.62726	38.07119	21.22295	26.05429	19.16728	-0.52625	6.350948	-11.4864	-19.7385	19.55885	13.79397	13.79397	13.79397
	0.04	0.702983	9.537838	24.45267	42.0947	36.19446	30.2508	51.01035	61.6906	57.2841	52.1334	49.21707	17.90738	17.13772	13.8148	18.24488	18.23192	13.28001	-17.1621	24.09617	18.29637	18.29637	18.29637
	0.05	2.969118	4.733575	25.79249	49.45521	50.44676	29.16756	15.79153	44.80657	34.8334	50.49798	25.52156	16.06158	20.93189	15,18385	63.14623	9.708923	26.0562	-14.1179	30.99205	23.96407	23.96407	23.96407
	0.06	3.793813	6.271557	28.92252	49.41524	67.10226	37.92824	10.86395	41.68145	32.35468	33.0974	20.32569	12.69032	13.58148	20.51301	43.42904	5.109239	12.75621	-12.937	-3.88811	28.80727	28.80727	28.80727
	0.07	8.782699	15.88078	44.84523	60.4137	63.56095	21.08303	10.2492	45.61809	48.73928	27.07673	28.71606	15.10669	17.46618	13.91916	20.28781	-2.90819	-21.851	-21.851	-13.7286	15.79461	15.79461	15.79461
	0.08	9.875323		51.51391	20.84506				47.55811			28.21046	17.37978	14.97781	20.74998	18.96317	0.61956	-21.3428		-13.1676	17.50894	17.50894	17.50894
	0.09	10.80805	18.03828	57.03471	18.57551	37.35509			46.05597	48.55095	32.89012	23.2572	19.62332	24.39031	27.5251	25.05006	3.724781	-20.4852		-12.2209	19.948	19.948	19.948
	0.1	11.95397	19.25898	61.87708	20.36855	-1.22892		21.63106				29.13189	21.61312	18.40733	34.07816	33.41855	8.545745	-19.3577	-19.3577	-10.9761	22.1312	22.1312	22.1312
	0.11	13.22607	21.34045	67.81909	13.14537	-6.43148		29.34194	35.06761	40.95815	35.53666	25.62245	19,16141	18.43539	17.25769	14.51611	1.366855	-18.8813		-10.4502	25.00434	25.00434	25.00434
	0.12	18.3776	28.53189	62.78358	19.52415	-4.62214	34.78942					31.69462	17.70505	17.37694	18.97648	8.342934	3.726894	-17.8332	-17.8332	-9.29314	26.61951	26.61951	26.61951
	0.13	18.3776	30.46641	67.06141	22.63704	-2.70022		22.73513 23.47521		23.69185	37.5498	38.75437	24.82522	25.83125	26.45728	3.010010	4.87082	-17.6743	-17.6743 -16.4198	-9.11783 -7.73286	28.25576	20.200.0	28.25576
	0.14		17.4946	2 432874	2.138718	-1.20755 0.257395		26.31779	27.48939	26.6508	19.16628	17.00075	20.87206	20.74874	26.457.20	17.11012	9.470204 10.10156	-16.1974	-16.4196	-7.73200	31.27525		34.32668
	0.15		19.0124	-9.92785	-9.92785	0.237335		31.00485	31.7461	28.95541	23.15492	21.83163	21 44902	19.47924	20.30546	19.06237	14.05163	-15.5622	-15.5622	-6.78617	35.34488		35.34488
		26.06578	21.51346	-9.72314	-9.72314	1.694385		34.69782	34,7021	25.63257	25.27311	25.61137	22,75419		21.45103	22.17169	17.0301	-14.7841	-14,7841	-5.92714			37.43425
		27.32512	22.72732	-8.42045	-8.42045	3.30423	33 03238	34.7821	32 3847	28.61797	25.68217	20.7394	21.65688	24 59665	24 22717	22.08754	19,73063	-14.1329	-14.1329	-5.20835			25.77915
		31.69677	26.94111	-7.82493	-7.82493	4,77709				30.04181			24.07755		16.63086	23,90351	23,90351	-13.2119		-4.19154	27.12837		27.12837
		32.33256	27.55395	-6.81999		-1.91057	40.52435	38.91424	23.89265	31.99661	29.29658		21.83006		17.67659	26.21292	26.21292	-12.4337	-12.4337	-3.33251	28.26822		28.26822
				BUY	VALUES																		
	QQQQ	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
	0	100.5555	2.657465	-8.17221	-18.3806	-55.2331	-55.2331	-54.6363	-52.3959	-52.0307	-49.8766	-47.6006	-54.6053		-55.5404	-57.2149	-49.6481	-47.3583	-47.2893	-31.1135	-42.36	-42.36	-42.36
SELL	0.01	121.3172	5.564335	-10.656	-16.7863	-54.8054	-54.8054	-54.2028	-51.6603	-51.2895	-49.1022	-46.7909	-56.2083	-53.8224	-50.3291	-56.0767	-56.231	-56.231	-56.231	-28.373	-40.067	-40.067	-40.067
VALUES	0.02		-51.3063	-53.5551	-53.5551	-54.8054	-54.8054	-53.8719	-51.0929	-51.0712	-48.6052	-46.2714	-56.566	-53.4038	-52.9813	-56.1693	-47.1236	-47.1236	-47.1236	-48.3558	-48.3558	-48.3558	-48.3558
		54.55258	-52.8051	-52.7543	-52.7543	-54.107	-54.107	-52.5223	-50.6718	-50.3646	-44.6691	-40.7866	-56.566	-53.4038	-54.2837	-55.7395	-46.6052	-46.6052	-46.6052	-48.3558	-48.3558	-48.3558	-48.3558
		61.97742	-52.8051	-52.7543		-53.9014	-53.9014	-51.6949	-48.0484	-48.39	-45.9175	-42.8638	-52.7994			-55.7395	-55.7395	-55.7395	-55.7395	-48.3558	-48.3558	-48.3558	-48.3558
	0.05		-51.8562 -51.8562	-52.1055	-52.1055	-52.6817 -52.6817	-52.6817 -52.6817	-49.3517 -49.3517	-46.412	-46.7936 -50.2235	-46.7936	-46.9285 -50.3497	-55.1713			-53.8811 -52.6609	-55.6691 -55.6691	-55.6691 -55.6691	-55.6691	-47.8956	-47.8956	-47.8956 -46.9753	-47.8956 -46.9753
	0.06	0.33682	-51.6562	-51.3654	-51.3654 -51.3654	-52.0017	-52.0017	-49.3517	-49.8665 -49.8665	-50.2235	-50.2235 -49.5821	-50.3497	-55.1713	-51.4242 -55.1713		-52.6609	-55.6691	-55.6691	-55.6691 -55.6691	-46.9753 -46.9753	-46.9753 -46.9753	-46.9753	-46.9753
	0.07		-50.8806	-49.855	-49.855	-52.2177	-52.2177	-48.2807	-48.8518	-48.0401	-48.0401	-48.1718	-55.1713			-55.6066	-46.4448	-46.4448	-46.4448	-46.3799	-46.3799	-46.3799	-46.3799
	0.00	-34.0638	-50.0336	-49.855	-49.855	-55 7093	-55 7093	-51 7113	-51.9108	-51 9108	-51.9108	-52.0327	-55.1713				-45.9197	-45.9197	-45.9197	-45.9197	-45.9197	-45.9197	-45.9197
		-31.6025	-50.0336	-49.855	-49.855	-55.7093	-55,7093	-55.2399	-51.9108	-51.9108	-51.9108	-52.0327		-55.1713								-55.1713	-55.1713
	0.11	-30.6632	-49.3475	-49.3633	-49.3633	-55,7093	-55,7093	-55.2399	-51.3707	-51.3707	-51.3707	-51.494		-55.1713								-55.1713	-55.1713
	0.12	-29.5919	-48.5648	-54.2039	-54.2039	-55,7093	-55,7093	-55.2399	-51.3707	-51.3707	-51.3707	-51.494		-55.1713						-55.1713	-55.1713	-55.1713	-55.1713
	0.13	-29.5919	-48.5648	-54.2039	-54.2039	-55.7093	-55.7093	-55.2399	-50.4444	-50.4444	-50.4444	-50.4444	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713
	0.14	-26.3444	-46.9673	-54.2039	-54.2039	-55.7093	-55.7093	-55.2399	-53.6389	-53.6389	-53.6389	-53.6389	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713
	0.15	-34.4797	-46.9673	-54.2039	-54.2039	-55.7093	-55.7093	-55.2399	-53.6389	-53.6389	-53.6389	-53.6389	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713
	0.16	-34.4797	-46.9673	-54.2039	-54.2039	-55.7093	-55.7093	-55.2399	-53.6389	-53.6389	-53.6389	-53.6389	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713	-55.1713
	0.17	-33.8373	-46.4474	-54.2039	-54.2039	-55.7093	-55.7093	-55.2399	-53.6389	-53.6389	-53.6389	-53.6389	-55.1713								-55.1713	-55.1713	-55.1713
	0.18		-46.4474	-54.2039	-54.2039	-55.7093	-55.7093	-55.2399	-53.6389	-53.6389	-53.6389	-53.6389		-55.1713			-55.1713				-55.1713	-55.1713	-55.1713
		-51.5667	-51.5667	-54.2039		-55.7093	-55.7093			-53.6389	-53.6389			-55.1713									
	0.2	-51.5667	-61.5667	-54.2039	-54.2039	-65.7093	-55.7093	-55.2399	-53.6389	-53.6389	-63.6389	-53.6389	-55.1713	-55.1713	-65.1713	-65.1713	-65.1713	-65.1713	-65.1713	-65.1713	-65.1713	-55.1713	-55.1713



### WEEKLY PROTECT PROFITS RESULTS

	<b>Sell Method</b> PP	Buy Method 4 week % Change	Start Date 6/10/00	Stop Date 10/30/09	
Ticker	IWM	QQQQ	SPY	DIA	
Std Dev in Period	3.314%	3.976%	2.709%	2.618%	
Mean Return	0.104%	-0.074%	0.005%	0.058%	
Buy & Hold Return	26.584%	-52.898%	-14.622%	12.233%	
Max Buy & Hold Draw Down	-57.895%	-80.170%	-54.614%	-51.395%	
Max Draw Down Date	03/02/09	09/30/02	03/02/09	03/02/09	
Opt Sell	9.000%	13.000%	8.000%	9.000%	
Opt Buy	-10.000%	-7.000%	-10.000%	-10.000%	
Opt Return	99.313%	-41.224%	66.759%	96.051%	
Opt Drawdown	-58.821%	-78.472%	-54.354%	-52.322%	
Total Trades with Opt Strategy	16	4	14	14	
Winning Sales	7	1	6	7	
Losing Sales	1	1	1	0	
Transaction Dates and Turner	110/04		0000		
Transaction Dates and Types	IWM 11/27/00	D	QQQQ 07/24/00	D	SPY 03/12/01 B
	11/27/00 01/22/01		07/24/00		03/12/01 B 04/16/01 S
	03/12/01		09/25/00		09/10/01 B
	04/23/01		10/26/09	_	10/01/01 S
	09/10/01		10/20/03	0	07/15/02 B
	10/08/01				08/12/02 S
	07/08/02				09/16/02 B
	06/02/03				11/11/02 S
	07/30/07				02/03/03 B
	10/01/07				04/21/03 S
	01/14/08				01/14/08 B
	05/12/08				05/12/08 S
	06/30/08				09/29/08 B
		•			

09/29/08 B 10/26/09 S

08/04/08 S

09/29/08 B 01/26/09 B 10/26/09 S 06/01/09 S

DIA 09/10/01 B 10/01/01 S 07/15/02 B 08/05/02 S 09/23/02 B 10/21/02 S 02/03/03 B 04/28/03 S 01/14/08 B 04/28/08 S 10/06/08 B 10/27/08 S



### WEEKLY PROTECT PROFITS TABLES

				BUY	VALUES																		
	IWM	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
		31.95326	34,38142			40.41908				23.17327	28.05763	49,78649			5.291799		-8.06662	-13.9741	-1.89379		-8.40616		
SELL	0.01	30.94664	37.32191	53.31875	58.48815	43.37853	16.65752	9.018783	7.826971	31.9238	45.66292	70.31039	-0.66381	2.464273	7.119246	12.77961	-2.08397	-10.0115	12.27613	-2.72943	4.420637	39.52933	24.01903
VALUES	0.02	37.05452	48.74061	55.5424	52.80003	43.60376	18.92985	9.93036	10.21715	34.07209	46.20034	70.05275	1.490399	3.655652	5.221968	7.151528	10.09686	-4.3446	-12.3818	5.030324	7.552612	51.79383	34.92019
	0.03	49.84862	53.44513	14.8645	19.33884	21.9228	35.54755	23.86416	21.9476	51.64589	36.52105	43.91171	9.458696	16.36923	7.9547	19.3949	10.1021	-3.86018	-8.7032	11.59724	21.61141	59.60103	37.37582
		58.47785	62.28147	5.866524	14.61721	22.5897	30.18463			44.95373		41.0924	17.04343	16.68899	10.40426	24.91593		5.126181	-4.84706	22.62376		62.12585	
	0.05		68.79249		18.57603	28.64791			31.84317		29.42413		13.81356	24.10868	15.92056	29.66984	28.61864	15.00639	-0.60887	31.5205		53.45547	35.85851
	0.06		73.37486			22.66942		39.80923	38.16878	60.18401	40.89332	39.25467		9.065783	14.04907	36.02732	17.32977	11.09397	-2.42976	14.63269		33.72296	25.48736
	0.07	74.42943	57.31335		9.220143	29.55027		46.45671	46.9569	46.53042	24.78887	39,48593	14.37611	11.35678	12.59613	20.95516	20.33196	13.9366		16.64878		40.37072	33.55466
	0.08		54.28176		4.34582					57.76897				12.52838	17.28131	20.95516		12.78287	1.051018	-5.51078 -4.60418	4.071282		33.55466
	0.09	84.17682	57.11798	8.317798		30.98462				66.88463 76.22017	45.85232	59.28203 50.21433	14.97517	16.87664	20.80245	27.64426	24.93716	16.43866	4.931337		6.230148		35.98544
	0.1	91.0066	52,68069	10.28925		28.44763	39.15794	70.30737 AD ADQAT	40.75828	39 74057	38.27834	53 82239	20.86539	20.53419	16.00000	16 97761	16.67582	16.43866	12,18424		14 65375		43.92892
	0.12		-9.05441	5 984403				47 03978	45.31449				14 60335	14 60335	18 29055	21 7139	20.6059	18 84603	5 373929		15.97668	56 04405	38 7087
	0.12		-7.39914			34,79059		34,91357	34,58657	53,15789	40.58961		21.58757	31.55689	28.48371	30.39366	28.73847	24,79675	6.878228	7.773268	18.8651	58,42443	38,7087
		8.233998	-7.39914		5.220946	38.38945	38.40457	38.51572	38.17998	39.55281	30.56735	48.93619	18.20531	17.21462	21.41766	30.39366	24.74492	25.59582	10.12559	8.789441	21.2402	60.5619	40.58016
	0.15	-6.64051	-5.19839	8.846053	6.640593	43.1299	42.4221	42.53648	42.19099	43.34293	34.11344	34.30619	21.92973	17.21462	24.81619	40.86601	37.64702	28.93061	14.16853	13.81507	27.3142	60.66154	36.78045
	0.16	-4.66882	-5.19839	10.69992	8.267344	46.6086	45.8836	45.8836	47.09624	44.50464	34.11344	35.75164	21.92973	16.1265	24.81619	44.5923	38.95545	34.7842	14.54498	16.39761	30.20304	60.66154	36.78045
	0.17	-4.66882	-5.19839	12.34699	9.878213	53.99852	53.59544	53.59544	53.22316	55.8001	53.07645	51.08673	25.25483	18.87857	17.20537	30.75454	22.045	23.43676	19.45198	18.12944	32.01142	62.89295	38.68018
	0.18		-3.91932				01.00200	62.20322	62.20461		41.40401		14.01215		18.78588	36.35311	27.10623	28.55571	24.48954	20.64829	35.14046		42.94309
		-2.93374	-2.48978		14.57012		63.47814		63.98321	62.55647				18.41662			27.10623				22.84876		45.88028
	0.2	-0.62686	-2.48978	21.37509	16.92431	26.22625	53,4009	53,13819	51.70907	43.49437	43.49437	42.15746	25.58942	18.41662	19.17487	38.29967	28.32578	29.78917	5.113958	25.90166	23.8811	76.32983	45.88028
				BUY	VALUES																		
	0000	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
	0	-50.2431	-47.9531	-47.9531	-46.0083	-45.4421	-47.9023	-46.9704	-46.9704	-46.9704	-45.4263	-45.4263	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103	-54.9513	-54.9513	-54.9513	-54.9513	-54.9513
SELL	0.01	-50.2431	-47.9531	-47.9531	-46.0083	-45.4421	-47.9023	-46.9704	-46.9704	-46.9704	-45.4263	-45.4263	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103	-54.9513	-54.9513	-54.9513	-54.9513	-54.9513
VALUES	0.02	-50.2431	-47.9531	-47.9531	-46.0083	-45.4421	-47.9023	-46.9704	-46.9704	-46.9704	-45.4263	-45.4263	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103	-54.9513	-54.9513	-54.9513	-54.9513	-54.9513
	0.03	-50.2431	-47.9531	-47.9531	-46.0083	-45.4421	-47.9023	-46.9704	-46.9704	-46.9704	-45.4263	-45.4263	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103	-54.9513	-54.9513	-54.9513	-54.9513	-54.9513
	0.04		-47.9531	-47.9531	-45.4421	-45.4421	-47.9023	-46.9704	-46.9704	-46.9704	-45.4263	-45.4263	-53.9722	-53.9722		-56.1103	-56.1103	-56.1103					
	0.05		-46.4376		-45.4421	-45.4421	-47.9023	-46.9704	-46.9704	-46.9704	-45.4263	-45.4263	-53.9722	-53.9722		-56.1103	-56.1103	-56.1103					
	0.06		-46.4376			-45.4421	-47.9023	-46.9704	-46.9704	-46.9704	-45.4263		-53.9722	-53.9722		-56.1103	-56.1103			-54.9513		-54.9513	
	0.07	-50.2431 -50.2431	-46.4376 -43.9287	-46.4376 -43.9287	-45.4421	-45.4421 -45.4421	-47.9023 -47.9023	-46.9704 -46.9704	-46.9704 -46.9704	-46.9704 -46.9704	-45.4263 -45.4263	-45.4263 -45.4263	-53.9722 -53.9722	-53.9722 -53.9722	-56.1103 -56.1103	-56.1103 -56.1103	-56.1103 -56.1103	-56.1103				-54.9513 -54.9513	
	0.08	-50.2431	-43.9287	-43.9207	-45.4421	-45.4421	-47.9023	-46.9704	-46.9704	-46.9704	-45.4263	-45.4263	-53.9722	-53.9722		-56.1103	-56.1103		-54.9513				
	0.03	-50.2431	-43.9287	-43.9287	-43.8536	-43.8536	-46.3854	-45.4263	-45.4263	-45.4263	-45.4263	-45.4263	-53.9722	-53.9722		-56,1103				-54.9513			
	0.11	-50.2431	-43.9287	-43.9287	-43.8536	-43.8536	-46.3854	-45.4263	-45.4263	-45.4263	-45.4263	-45.4263	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103					
		-50.2431	-43.9287	-43.9287	-43.8536		-46.3854	-45.4263	-45.4263	-45.4263	-45.4263	-45.4263	-53.9722	-53.9722	-56,1103	-56,1103	-56,1103	-56,1103					
	0.13	-50.2431	-51.5059	-51.5059	-41.2236	-41.2236	-43.874	-42.8701	-42.8701	-42.8701	-42.8701	-42.8701	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103	-54.9513	-54.9513	-54.9513	-54.9513	-54.9513
	0.14	-50.2431	-51.5059	-51.5059	-41.2236	-41.2236	-43.874	-42.8701	-42.8701	-42.8701	-42.8701	-42.8701	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103	-54.9513	-54.9513	-54.9513	-54.9513	-54.9513
	0.15	-50.2431	-51.5059		-41.2236		-43.874	-42.8701	-42.8701	-42.8701	-42.8701	-42.8701	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103	-54.9513	-54.9513	-54.9513	-54.9513	-54.9513
	0.16		-51.5059	-51.5059	-41.2236		-43.874	-42.8701	-42.8701	-42.8701	-42.8701	-42.8701	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103					
	0.17		-51.5059	-51.5059	-41.2236		-43.874	-42.8701	-42.8701	-42.8701	-42.8701	-42.8701	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103					
	0.18		-51.5059				-43.874	-42.8701	-42.8701	-42.8701	-42.8701	-42.8701	-53.9722	-53.9722	-56.1103	-56.1103	-56.1103	-56.1103					
		-50.2431		-51.5059		-49.1664	-49.1664	-49.1664	-49.1664	-49.1664	-49.1664	-49.1664	-53.9722									-54.9513	
	0.2	-50.2431	-51.5059	-51.5059	-49.1664	-49.1664	-49.1664	-49.1664	-49.1664	-49.1664	-49.1664	-49.1664	-03.9722	-03.9722	-56.1103	-56.1103	-56.1103	-56.1103	-54.9513	-04.9513	-04.9513	-54.9513	-04.9013



### MONTHLY PROTECT PROFITS RESULTS

	<b>Sell Method</b> PP	Buy Method 1 month % Change	<b>Start Date</b> 6/10/00	<b>Stop Date</b> 10/30/09		
Ticker Std Dev in Period Mean Return Buy & Hold Return Max Buy & Hold Draw Down Max Draw Down Date Opt Sell Opt Sell Opt Buy Opt Return Opt Drawdown Total Trades with Opt Strategy Winning Sales Losing Sales	IWM 5.992% 0.388% 25.894% -52.723% 02/02/09 6.000% 7.000% 115.909% -58.821% 16 8 0	-0.355% -54.925% -79.612% 09/03/02 0.000% -4.000% -46.083% -78.472% 4 3 1	4.641% -0.060% -17.227% -50.782% 02/02/09 19.000% 7.000% 56.937% -54.354% 4 2	DIA 4.453% 0.184% 9.849% -47.527% 02/02/09 17.000% 6.000% 53.500% -52.322% 4 2 0		
Transaction Dates and Types	IWM 12/01/00 06/01/01 11/01/02 04/01/02 11/01/02 06/02/03 10/01/03 01/02/04 11/01/04 07/01/05 01/03/06 10/02/06 03/02/09 05/01/09 07/01/09 09/01/09	S B 2 S 2 B 3 S 3 B 4 S 4 B 5 S 5 S 5 S 5 S 5 S 5 S 5 S 5 S 5 S 5 S	QQQQ 07/03/00 08/01/00 09/01/00 10/01/09	S B	SPY 04/02/01 B 11/01/06 S 03/02/09 B 08/03/09 S	DIA 08/01/00 B 10/02/06 S 03/02/09 B 08/03/09 S

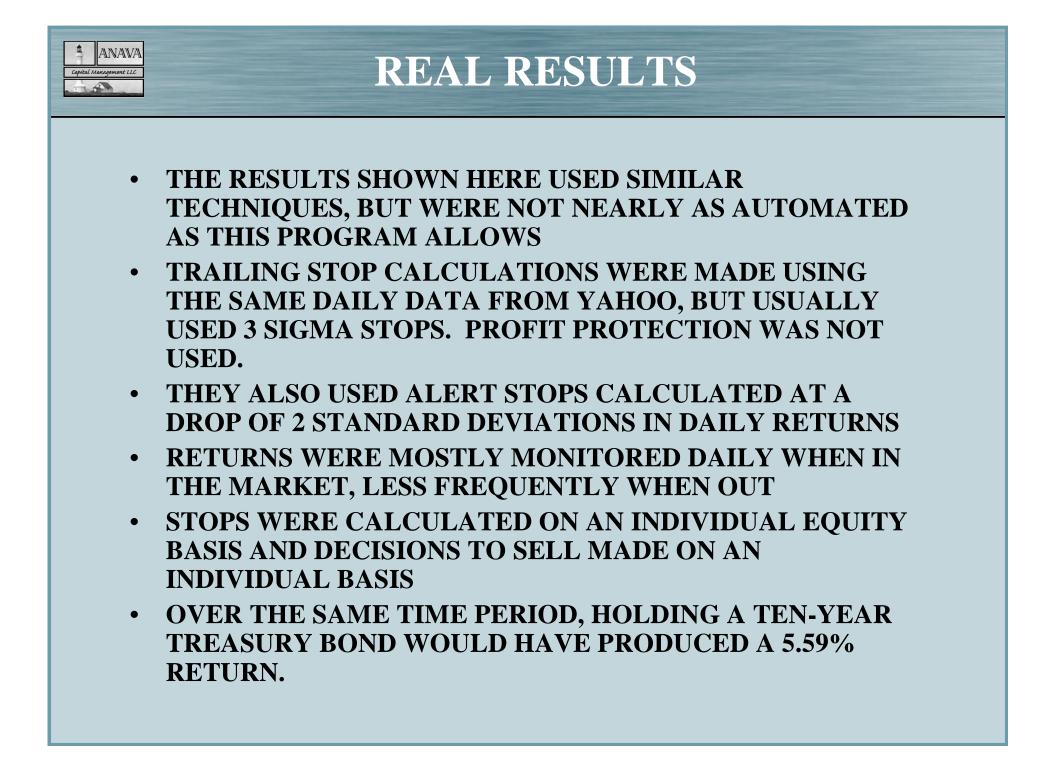


## **MONTHLY PROTECT PROFITS TABLES**

				BUY	VALUES																		
	IWM	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
		15.30585	24.55099				6.729197	1.576786	1.823333	2.842764	-6.66884	2.19521		4.118505	3.073983		51,17118		66.96256	35.51333	22.22601	15.94994	3.399668
SELL	0.01	15.30585	24.55099	24.55099	7.199465	1.268314	18.28672	12.57637	8.499791	9.564604	-0.56869	10.64779	18.60512	4.968976	4.591285	2.740824	51.17118	49,10781	75.14793	42.15691	22.22601	15.94994	3.399668
VALUES	0.02	15.30585	24.55099	24.55099	7.199465	1.268314	18.28672	7.395851	3.50687	14.62903	4.027343	6.75633	18.60512	1.304839	5.215542	3.354036	51.17118	49.10781	67.21514	42.15691	22.22601	15.94994	3.399668
	0.03	15.30585	24.55099	24.55099	7.199465	3.192715	25.63962	12.1411	9.941029	21.75456	8.433299	16.14619	18.60512	1.304839	5.215542	3.354036	77.86656	52.91067	92.1049	63.31678	36.18149	15.94994	3.399668
	0.04	26.4964	36.63879	36.63879	21.80399	18.01429	30.97409	16.55905	19.56974	32.41791	17.92996	26.31835	11.63962	3.027983	7.40173	5.501546	77.86656	52.91067	92.1049	69.25812	38.63866	18.04206	5.26534
	0.05	30.21554	40.65612	40.65612	21.80399	21.37579	36.31814	21.72007	22.97555	36,18968	17.92996	26.31835	12.73241	3.027983	7.40173	5.501546	90.02308	52.91067	92,1049	69.25812	38.63866	18.04206	5.26534
	0.06	30.21554	40.65612	40.65612	21.80399	36.66499	60.83673	32.91654	50.03525	54.30574	33.61711	43.12132	20.62254	5.031639	9.490445	9.490445	93.44558	57.08932	115.9087	77.41147	43.39624	28.87459	14.92537
	0.07	40.16256	51.40069	51.40069	20.94389	47.10468	52.84231	26.89663	43.24002	37.33516	18.92186	27.3808	10.83483	5.031639	9.490445	9.490445	101.9087	63.46098	99.47782	82.00498	43.39624	28.87459	14.92537
	0.08	47.948	59.81036	59.81036	20.94389	36.9652	42.30736	18.15003	33.36692	27.86906	18.92186	25.54933	22.67407	23.59577	35.53244	35.53244	110.6451	69.5359			43.39624	28.87459	14.92537
	0.09	47.948	68.394	68.394	27.43996	17.97394	41.6113	18.15003	33.36692	27.86906	18.92186	25.54933	22.67407	6.730935	6.74099	6.74099	93.0849				53.88541	28.87459	14.92537
	0.1	47.948	68.394	68.394	27.43996		44.55372	20.60498	38.59002			39.93442		25.69788	37.83756	37.83756	114.2277	64.47008		62.09858	53.88541	28.87459	14.92537
	0.11	47.948	68.394	68.394	27.43996		54.06384	34.29071	30.59115	32.71397	23.42776	30.30634	27.42918	21.3554	16.59711	16.59711	114.2277	64.47008	72.35178	62.09868	53.88541	28.87469	14.92537
	0.12	47.948	68.394	68.394	27.43996		57.06002	36.90235	38.89132	35.29495		25.82815		21.3554	16.59711	16.59711	21.27305		72.35178	62.09858	53.88541	28.87469	14.92537
	0.13	47.948	68.394	68.394	27.43996		57.06002	36.90235	38.89132	35.29495	20.020.0	25.82815			16.59711	16.59711	22.43549	66.04657	72.35178	62.09858	63.88666	37.25035	14.92537
	0.14	45.17577	67.69681	67.69681	30.82133	36.23896	68.09067	42.89172	44.9677	43.75739	33.69846 36.9099	33.69846	21.26191	13.96285	8.928557	8.928557	23.59792	67.62306	72.35178	62.09858	63.88666	37.25035	14.92537
	0.15 0.16		88.41098			53.06741	72.12821	48.95942	48.44983	47.21045		36.9099 42.83389	13.51725	16.31535	21.25317	21.25317	100.118	68.62352 90.9908	12.00110	62.09858	63.88666 64.40514	41.20507	18.30431
		63.10811 63.10811		35.52493		12.74676		10.00012		53,58013		42.03309	13.51725	16.31535	21.25317		20.2671 20.2671	90.9908	72.35178	70.0455	72.46514	41.20007	18.30431
		63,10811	35.52493			12.74676	40.02875	38,91483	49.87276	37 79942		42.0000	26.23704	16.31535	21.25317	21.25317	20.2671	90.9908	84 05777	70.0455	72.46514	41.20007	18.30431
		63.10811		35.52493		12.74676	28.35827						26.23704	16.31535			20.2671	90.9908		82.72361	82.04486	41.20007	24.87562
		63.10811	35.52493		5.723843		28.35827				30.82026				26.54251		26.16322	103.9692			90.7589		
	0.2	03.10011	00.02400	33.32433	0.720040	10.00047	20.00027	27.33710	34.00013	40.00204	30.02020	30.11002	20.20104	20.04000	20.04201	20.04201	20.10322	100.0002	00.40002	00.02002	00.7000	00.27210	24.07.002
				BUY	VALUES																		
	QQQQ	-0.1	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	-1E-17	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11
		-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566
SELL	0.01	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566
VALUES	0.02	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566
	0.03	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566
	0.04	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566
	0.05	-52.5463	-52.5463		-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566
	0.06	-52.5463	-52.5463		-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566		-58.5566	-58.5566	-58.5566	-58.5566		-58.5566	-58.5566	-58.5566	-58.5566
_	0.07	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566		-58.5566	-58.5566	-58.5566	-58.5566
	0.08	-52.5463	-52.5463		-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566		-58.5566	-58.5566	-58.5566	-58.5566
	0.09	-52.5463	-52.5463		-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566		-58.5566	-58.5566	-58.5566	-58.5566
		-52.5463	-52.5463		-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566		-58.5566	-58.5566	-58.5566	-58.5566
	0.11	-52.5463	-52.5463		-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566		-58.5566	-58.5566	-58.5566	-58.5566
		-52.5463	-52.5463		-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566		-58.5566	-58.5566	-58.5566	-58.5566
	0.13	-52.5463	-52.5463		-52.5463	-52.5463	-52.5463	-46.0825	-46.0825	-46.0825	-46.0825	-46.0825	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566	-58.5566		-58.5566	-58.5566	-58.5566	-58.5566
	0.14	-52.5463 -52.5463	-52.5463 -52.5463		-52.5463 -52.5463	-52.5463 -52.5463	-52.5463 -52.5463	-52.9115 -52.9115	-52.9115 -52.9115	-52.9115 -52.9115		-52.9115 -52.9115	-58.5566 -58.5566	-58.5566 -58.5566	-58.5566 -58.5566	-58.5566 -58.5566	-58.5566 -58.5566	-58.5566		-58.5566	-58.5566 -58.5566	-58.5566	-58.5566 -58.5566
	0.15		-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-52.9115		-52.9115		-52.9115	-50.5566	-50.5566	-50.5566	-50.5566	-50.5566	-58.5566 -58.5566		-58.5566 -58.5566	-50.5566	-58.5566 -58.5566	-58.5566
	0.18	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-52.5463	-52.9115	-52.9115			-52.9115	-58.5566	-58.5566	-58.5566	-58.5566	-50.5566	-58.5566		-58.5566	-58.5566	-58.5566	-58,5566
	0.17		-52.5463		-52.5463	-52.5463	-52.5463	-52.9115	-52.9115			-52.9115		-50.5566	-50.5566	-50.5566	-50.5566	-50.5566		-50.5566	-50.5566	-50.5566	-58.5566
	0.10		-52.5463			-52.5463					-52.9115		-58.5566		-58.5566	-58.5566	-50.5566	-50.5566			-58.5566	-58.5566	-58,5566
		-52.5463		-52.5463							-52.9115										-58,5566	-58.5566	-58,5566
	0.2	JZ.J4UJ	32.3403	JZ.J40J	52.5400	32.3403	32.3400	52.5110	32.5113	52.5115	52.5115	32.3113	30.3300	30.3300	30.3300	30.3300	00.0000	30.3300	30.3300	30.3300	30.3300	30.3300	50.5500

# A HAND CALCULATION METHOD

- In spite of the fact that distributions in security returns are rarely described by standard statistics, the standard deviation (sigma) of returns can be legitimately used to set trailing stops.
- This is because the relatively small random fluctuations seen in day-to-day returns are well described by a standard deviation. What you really want to know is if something is going on that is *not* well described.
   Exceeding a stop says that something is going on that is not random, and that's when you want to get out.
- Excel makes it very quick and easy to calculate the standard deviation of returns (better known as "sigma"). A 3 sigma change has 1 chance in 370 of being random, and usually signals the start of a significant price move.





# **RESULTS ON A PERSONAL IRA**

