

# The Use of Exchange Traded Funds By Hedge Funds

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# Assessing and Isolating Risk

## *Cash*

Currency Risk, Opportunity Risk

## *Fixed Income*

Duration Risk, Credit Risk, Interest Rate Risk

## *Equities*

Market Risk, Company Risk, Industry Risk

## *Hard Assets*

Liquidity Risk, Financing Risk, Tax Risk

# Risk Isolation Techniques

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- Market neutral / Pairs trading
- Macroeconomic
- Derivatives / Delta management
- Volatility / Beta management
- Tax management

# Pairs Trading with ETFs: Bonds

## Single-A Corporate Bond Spreads Over 10-Year Treasuries

.IGS ↓ 183.12 0s Index GPO  
 At 12:56 Vol 3 Op 11450.43 Hi 11450.43 Lo 183.12 Prev  
**Line Chart .IGS Index** 1/10  
 Range **10/11/01** - **10/11/02** Period  Daily  
 Upper Chart:  Line Chart Moving Averages **50** **200**  
 (USIGYLD Index - GT10 Govt) \* 100



Using ETF's to isolate credit risk and to anticipate bond spreads narrowing:

Bought LQD, Short IEF

Sold LQD, Cover IEF

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 920410  
 Hong Kong 852 2977 6000 Japan 81 3 3201 8900 Singapore 65 212 1000 U.S. 1 212 318 2000  
 Copyright 2002 Bloomberg L.P. 6453-978-3 11-Oct-02 12:56:32

**LQD: iShares Goldman Sachs InvesTop Corporate Bond Fund**  
**IEF: iShares Lehman 7-10 Year Treasury Bond Fund**

# Pairs Trading with ETFs: Equity

**Nvidia Corp., Oct - June, 2001**



**Nvidia Corp. rallies into  
Microsoft Xbox release**



**Using ETF's to isolate  
company risk:  
Long NVDA, Short SMH**

**Semiconductor HOLDRs, Oct - June, 2001**



**SMH: Semiconductor HOLDR**

# Macroeconomic Trades Using ETFs

10 Year Treasury Yield  
July 24<sup>th</sup>, 2002, 30 Min.



**Asset Allocation Program  
Sell Bonds to Buy Stocks**



**Using ETF's to isolate  
macro risk:  
Short IEF, Long SPY**

S&P 500  
July 24<sup>th</sup>, 2002, 30 Min.



**IEF: iShares 7-10 Yr T-Bond Fund  
SPY: S&P 500 ETF**

# Delta Management with ETF's

**Isolating volatility risk by buying puts and buying SPY.**

P255 Index PUT

SPX 839.64 S&P 500 INDEX +4.15 13:32 Hedge: 33 Fin Rate 1.56 Volat: 36.09

Div pt 1.47 Days

Hit 99 <go> for option model defaults

SPX Nov 02	LAST TRADE INFO				IMPL. VOLAT		HEDGE			*THEORETICAL	
	Bid	Ask	Last	Chnge	Bid	Ask	Del	Gam	Vega	Price	Diff
1) WE 725	6.10	6.80	6.80	-.70	42.17	43.60	115	002	.50	3.48	-2.97
2) WH 740	7.80	8.80	9.50	-.50	41.03	42.78	144	002	.58	5.21	-3.09
3) WJ 750	9.20	10.20	9.50	-1.20	40.34	41.93	166	002	.64	6.70	-3.00
4) WL 760	10.50	12.10	12.30	-1.20	39.18	41.52	190	003	.69	8.48	-2.82
5) WN 770	12.30	13.90	15.50	-.50	38.46	40.62	216	003	.75	10.60	-2.50
6) WO 775	13.30	14.90	13.50	-1.80	38.10	40.18	231	003	.77	11.80	-2.30
7) WP 780	14.40	16.00	20.50	unch	37.78	39.79	246	003	.80	13.08	-2.12
8) WR 790	16.80	18.40	17.00	-2.00	37.10	38.99	278	003	.85	15.95	-1.65
9) WT 800	19.50	21.10	19.50	-2.00	36.39	38.18	314	004	.90	19.23	-1.07
10) WE 825	27.80	29.60	28.10	-2.60	34.56	36.39	414	004	.98	29.30	+.60
11) WH 840	33.90	35.90	35.00	-4.90	33.34	35.33	481	005	1.01	36.67	+1.77
12) WJ 850	38.20	40.20	39.40	-5.90	32.69	34.68	528	005	1.00	42.12	+2.42

**Example: Purchase 100 SPX 840 Puts @ 35.90**

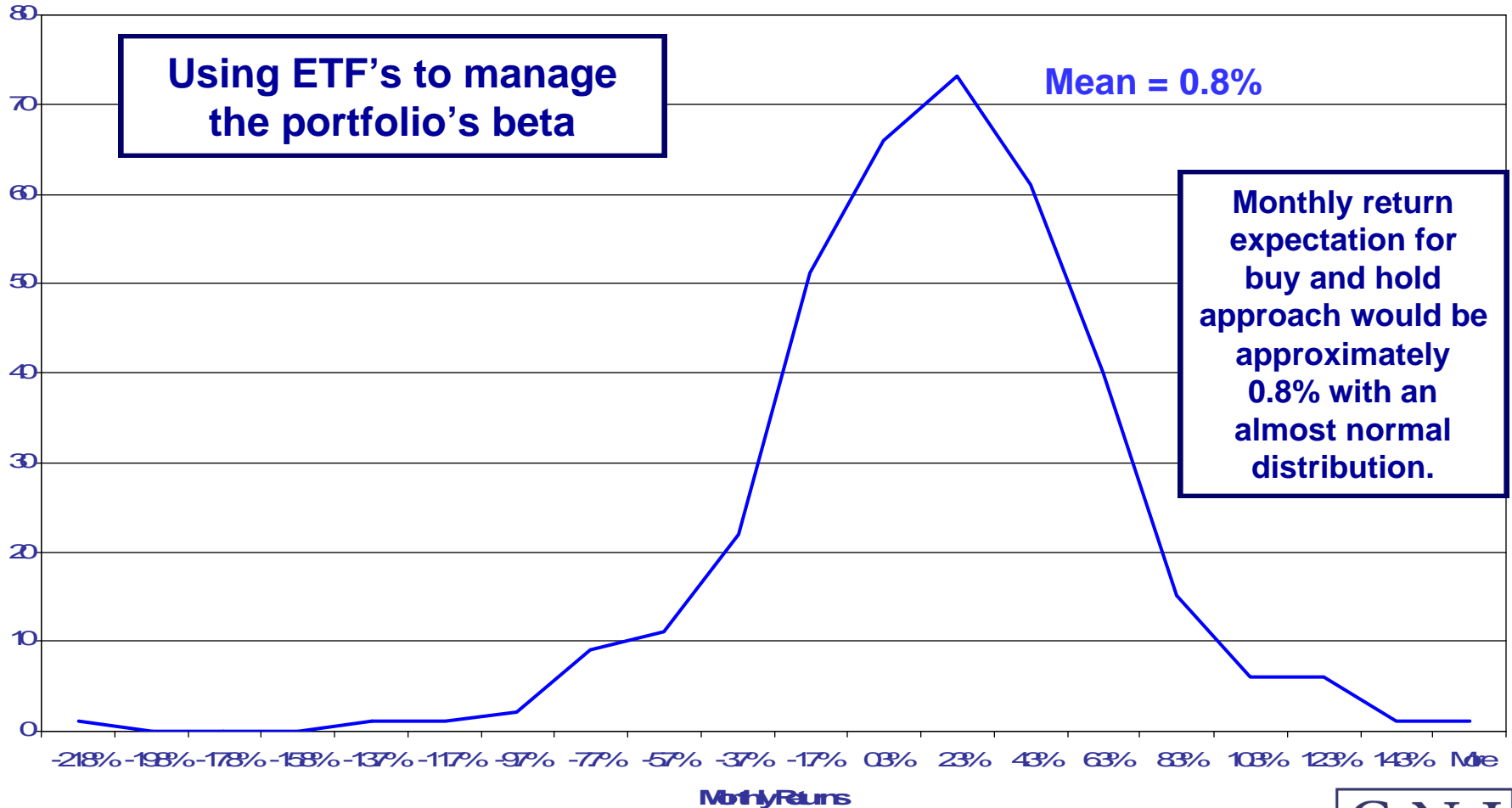
**Delta = 0.481 so put contract will move \$0.48 for every 1 SPX point**  
**For every 1 contract, must buy 481 SPY.**

**In order to hedge 100 puts, must currently buy 48,100 SPY**

**Manage delta as SPX moves and delta changes.**

# Beta Management with ETF's

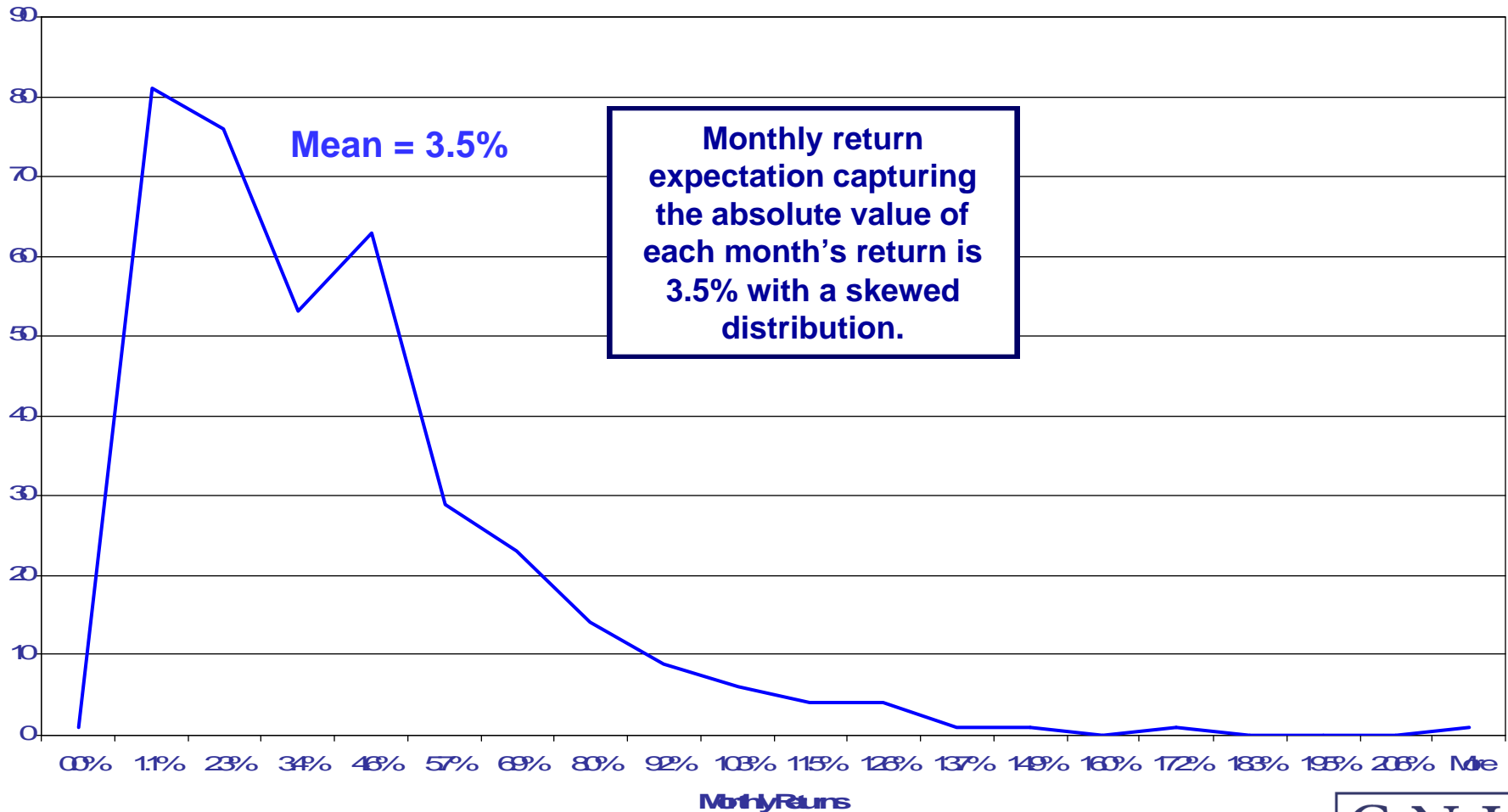
Frequency Distribution of Monthly Returns





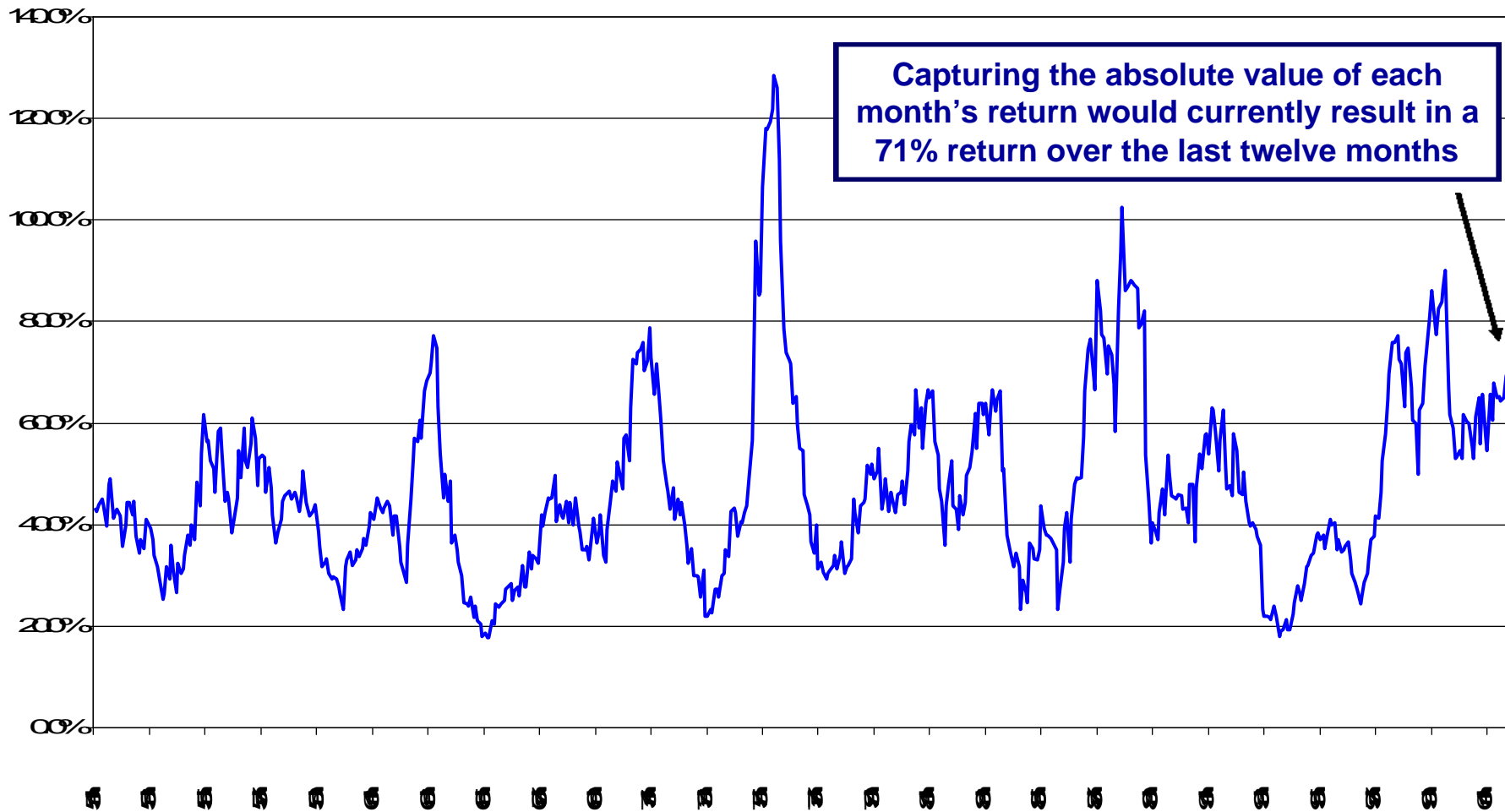
# Absolute Value of Monthly Returns

Frequency Distribution of Absolute Value of Monthly Returns



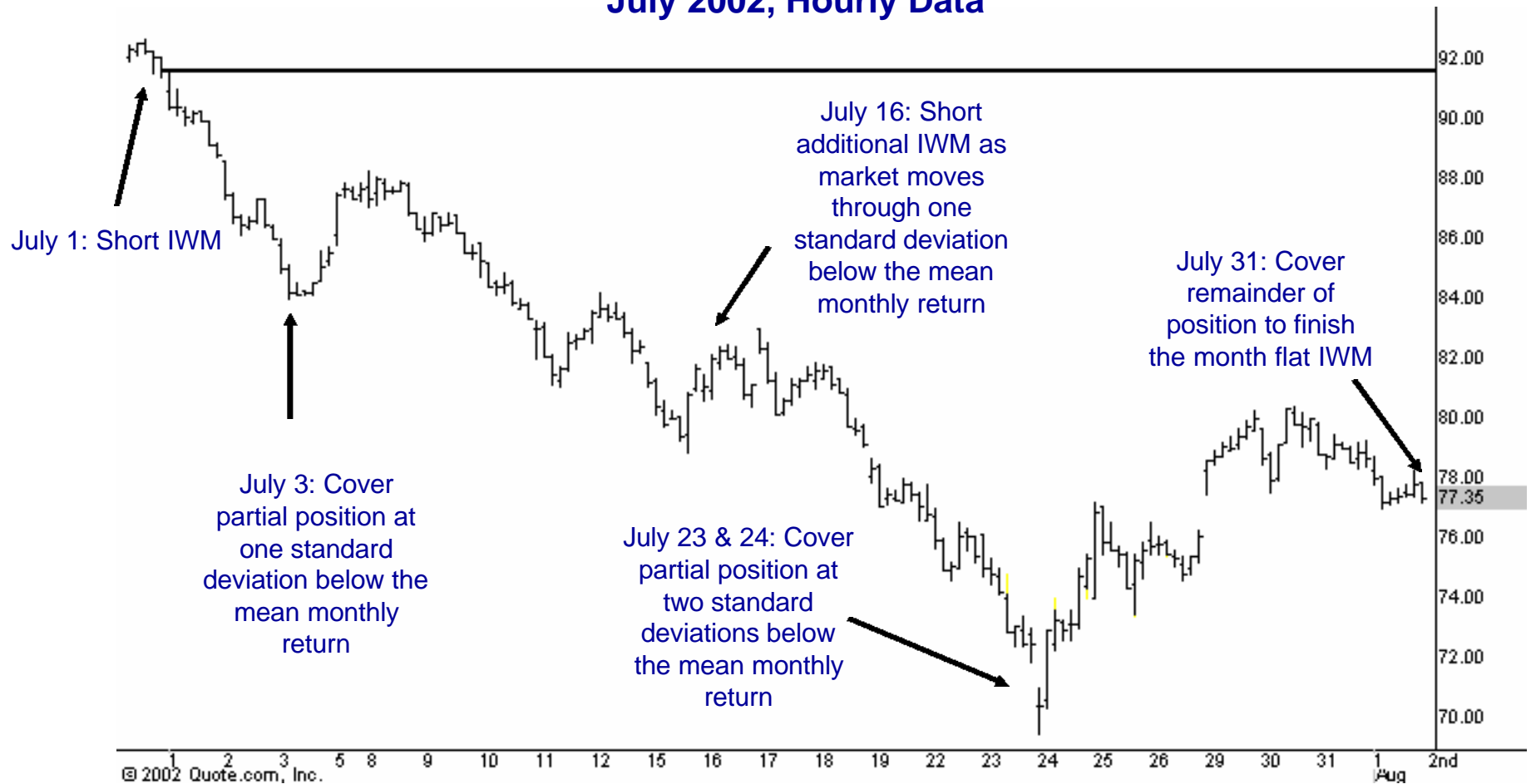
# Capturing The Absolute Value

Rolling Twelve Month Total Absolute Value of S&P Monthly Returns



# Absolute Value Strategy at Work

## Russell 2000 iShares (IWM) July 2002, Hourly Data



**In July, IWM was highly correlated with portfolio's long exposure. Since the Russell 2000 was down in July, we traded IWM from the short side as a hedge.**

# Tax Management with ETFs

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## Situation:

- Client sold family business to ESOP plan of a public company in a 1042 Rollover transaction.
- Deferred capital gains tax if a qualified replacement asset is purchased.
- Qualified assets, in this case, were securities of domestic public companies.
- Client Concerns:
  - Tax Deferral, Capital Preservation, Income

# Tax Management with ETFs

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## Possible Solutions:

- Buy long term floating rate notes.
- Buy non-callable long-term corporate bonds and hedge interest rate risk with Fixed Income ETFs.



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