Using Historical Probabilities to Trade the Opening Gap

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Hosted by Hamzei Analytics

November 10, 2010

Master the Gap

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Agenda

- Your Trading Style
- The Basics
- How I Trade Gaps
- Gap Zones
- Entries, Targets, & Stops
- For More Info...

Trading Style: Discretionary vs. Probability-Based

Decision Process	Description	Advantages	Disadvantages
Probability-Based	Selection, entry, targets and stops are guided by historical probabilities.	•Minimizes emotion •Augments lack of experience	•Can be difficult to interpret conflicting data •Access to reliable data/research
Discretionary	Decisions are based upon interpretation of indicators and price action.	•Basic can be learned and applied quickly •Appeals to independent nature of many	•Can take many years to achieve consistent profitability •Difficult to discern excellence from random results

Which style would Malcolm Gladwell choose?
(author of Outliers)

What is a Gap?

The most common definition is the difference between a security's opening price and its prior day/session closing price.

This difference shows up visually on a price chart as an open space or “gap.”

What Does a Gap Look Like?

GAP

Example of Gap: 5 Min Chart

Next day opening price (9:30 am ET)

Price retraces & fills gap

Prior day closing price (4:15 pm ET)

More examples of gaps…

(see charts)

Fade the Gap

"The Easiest Trade of The Day"

- ✓ Gap fades have an **inherent bias & edge.** **(>70% fill by end of day)***
- ✓ Can **prepare in minutes** before opening bell.
- ✓ **Pre-defined entry, target and stop** – no need to time the entry or exit
- ✓ Risks are limited and controlled - **no overnight risk**.
- ✓ They work in **bull and bear markets** – no need to predict the market's next move (market neutral).

(based upon hypothetically fading opening gaps ≥ 1 point in the E-Mini S&P 500 futures, 1998-2009, targeting prior close, exiting end of day if gap did not fill. This not a recommended strategy.)*

Index futures (S&P, Dow, Russell, Nasdaq) are ideal gap trading markets due to liquidity, reversion bias, & ease.

Key Terms

- Fade: to trade in the opposite direction of the gap
- Gap Fill: when price retraces from the open (9:30 am ET) to the prior day's closing price (4:15 pm ET)
- Win Rate (%): percent of opening gaps that, if faded at the open, fill the gap or end the day profitable*
- Profit Factor = hypothetical gross profits from winning trades* / hypothetical gross losses from losing trades*

**** Unless noted otherwise, all research shown in this presentation is based upon hypothetically trading the opening gap from 1998 – 2009, including commissions, but not accounting for any potential slippage or missed fills.***

The Paradox of Gap Fading

Year	Profit Factor
2009	1.20
2008	0.90
2007	0.71
2006	1.01
2005	1.05
2004	1.11
2003	1.30
2002	1.14
2001	1.16
2000	0.94
1999	1.14
1998	1.06
Average:	**1.06 (yawn)**

Though an extremely high win rate, the profits from the winners barely exceed the losses from the losers.

The Stop Dilemma

Stop As % of Gap Size	Win %	Average Win/Loss Ratio	Profit Factor
25%	21.4	3.49	0.95
50%	36.0	1.80	1.01
75%	47.0	1.18	1.05
100%	53.7	0.91	1.06
125%	59.0	0.73	1.05
150%	61.8	0.64	1.04
175%	64.7	0.57	1.05
200%	66.1	0.53	1.03

Using small stops does not improve profitability due to the reduction in win rate.

The key to making money fading opening gaps is…

SELECTION

How I Trade Gaps

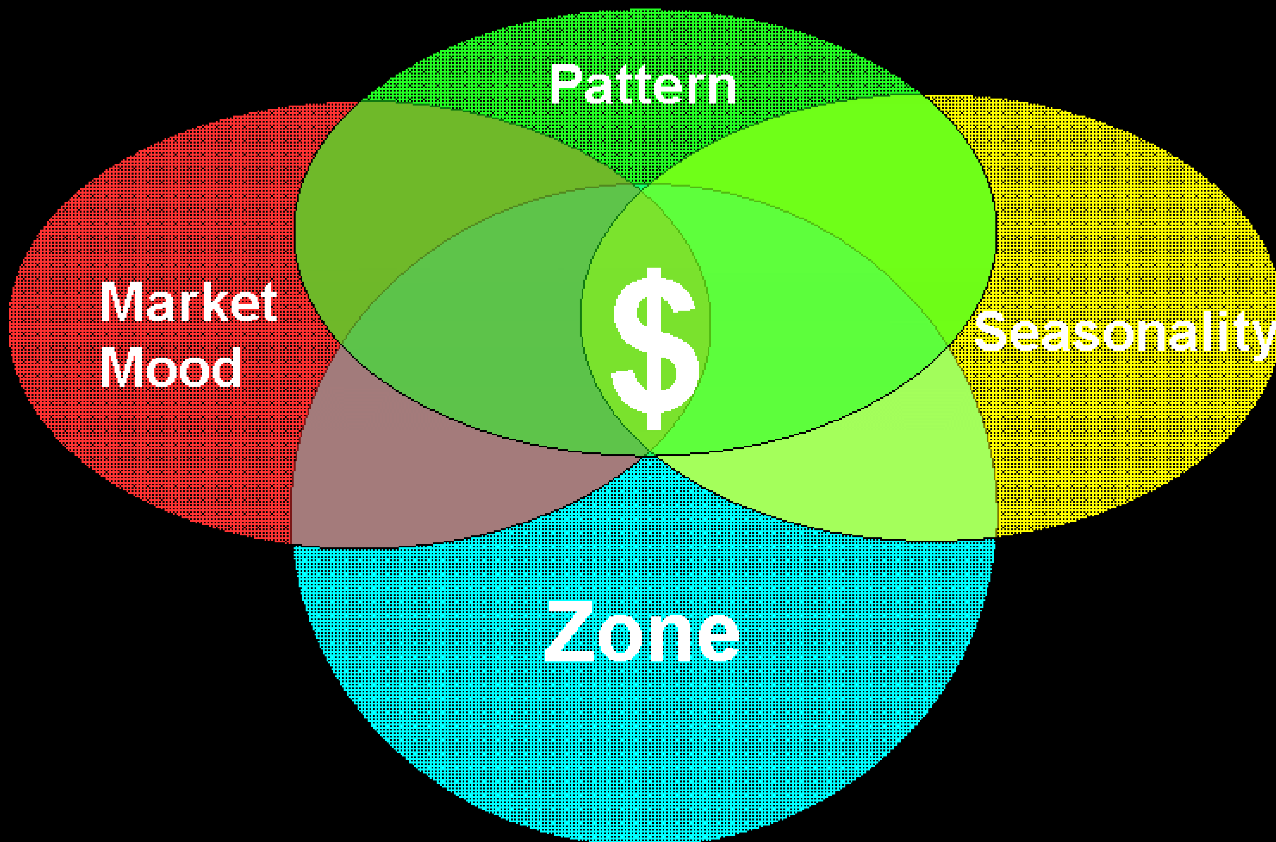
1. **Focus on <u>SELECTION</u>**

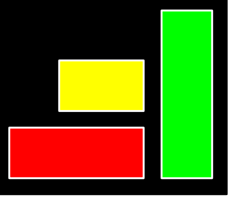
2. **Fade the open**

3. **Hold for gap fill or beyond (rarely scale out prior to fill)**

4. **Use a LARGE enough stop to let probabilities work (~30% of 5 day ATR)**

Selecting Gaps To Trade

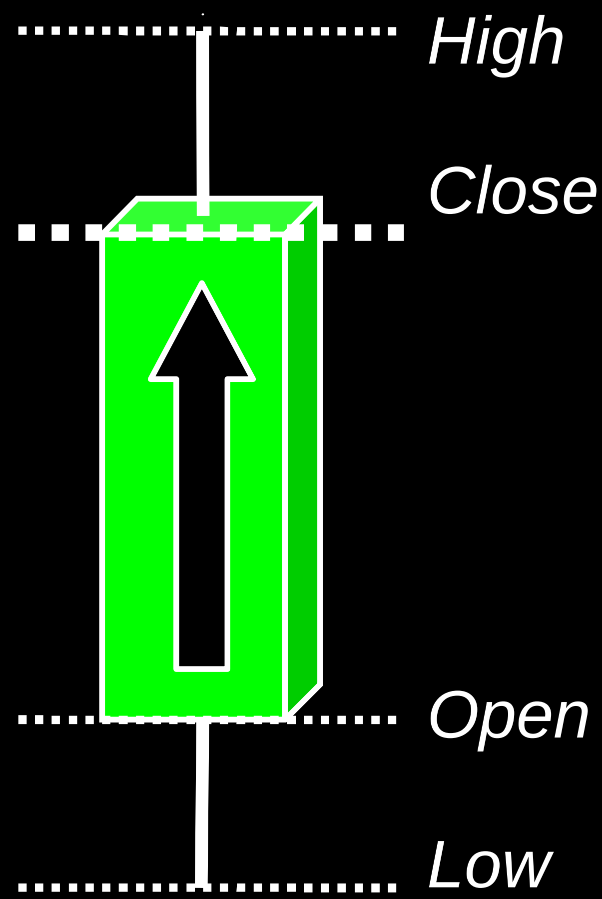




"Gap Zones"

<u>Definition</u>:

Location of the opening price gap relative to the <u>prior day</u>'s key price levels:
Open, High, Low & Close

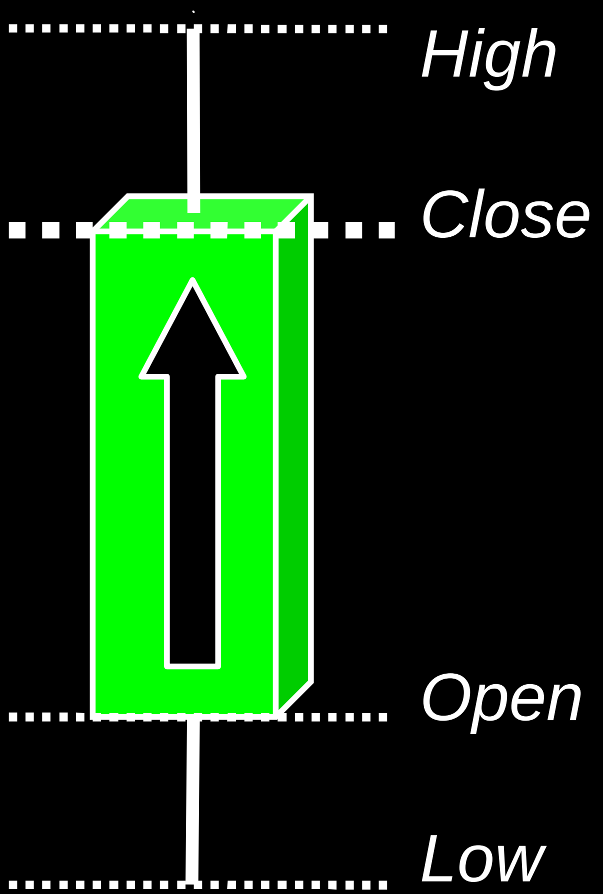


"Location, location, location"… applies to gaps too!

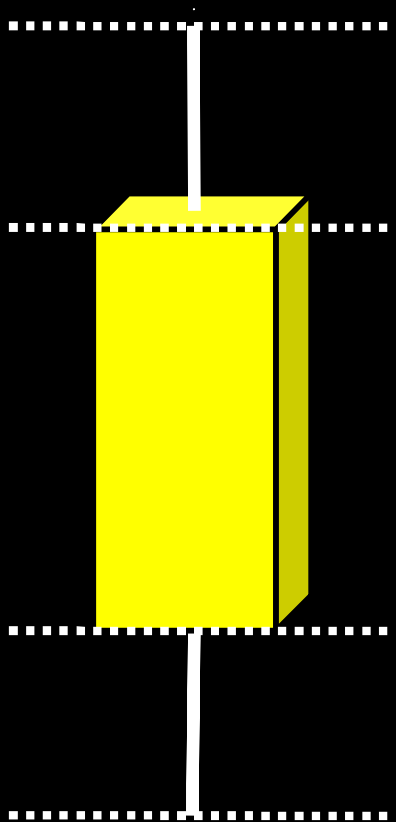
Why Gap Zones Work

They inherently incorporate:

- Proven support & resistance
- Short term trend
- Gap size
- Trader psychology



Gap Fade Win %

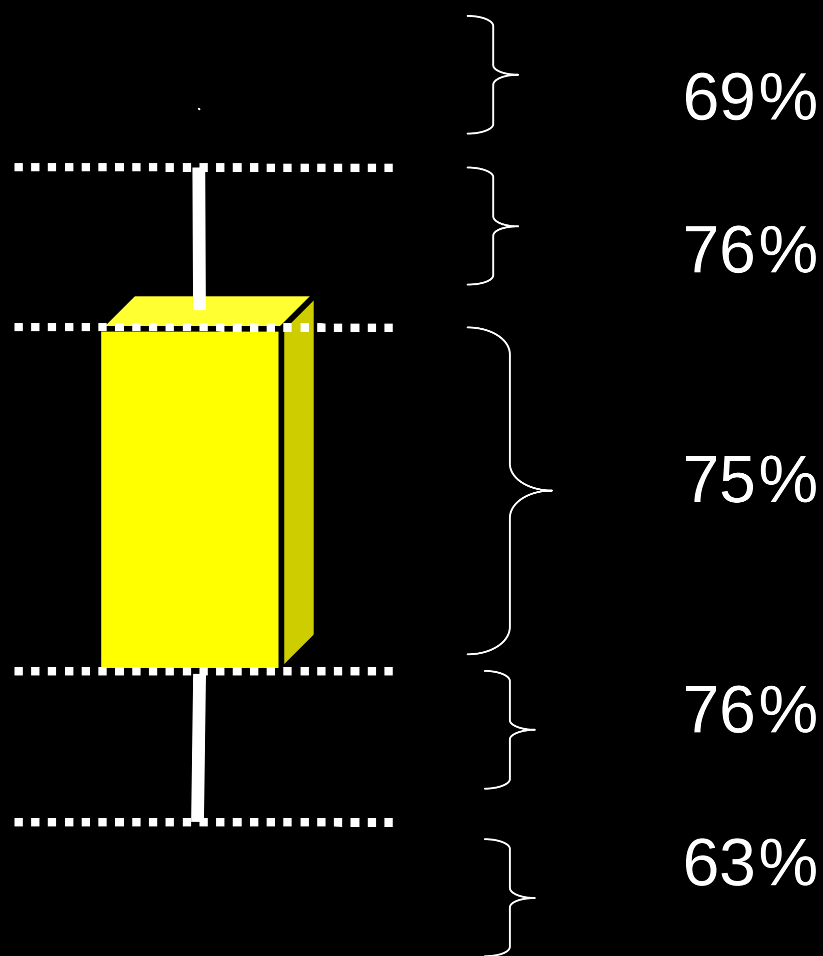


All gaps $\geq$ 1 point = 72.4 %

"Win %" is based upon hypothetically fading opening gaps $\geq$ 1 point in the E-Mini S&P 500 futures, 1998-2007, using no stop, targeting prior close, exiting end of day if gap did not fill. This not a recommended strategy.

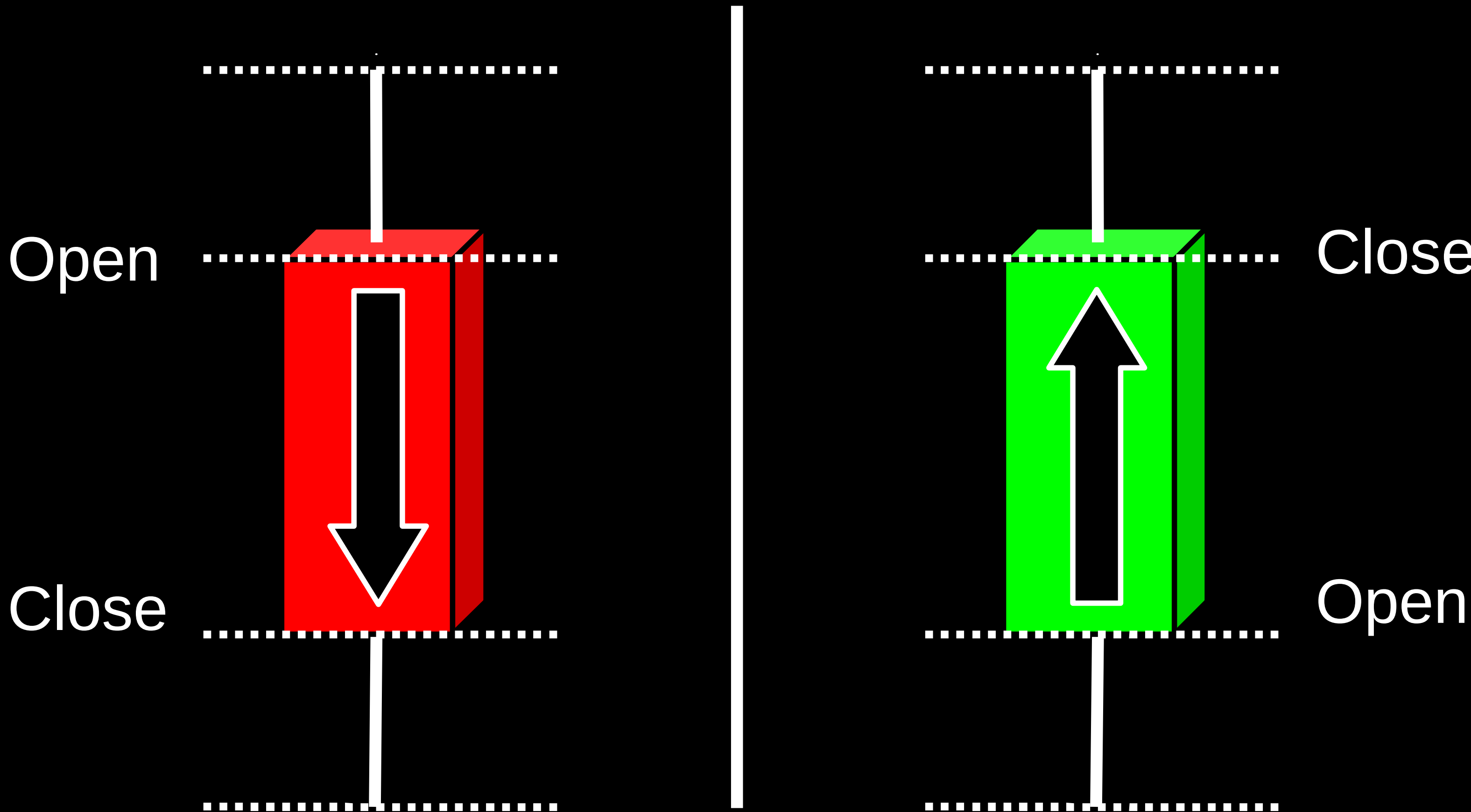
Gap Fade Win % By Zone

Prior Day — Historical Win Rate



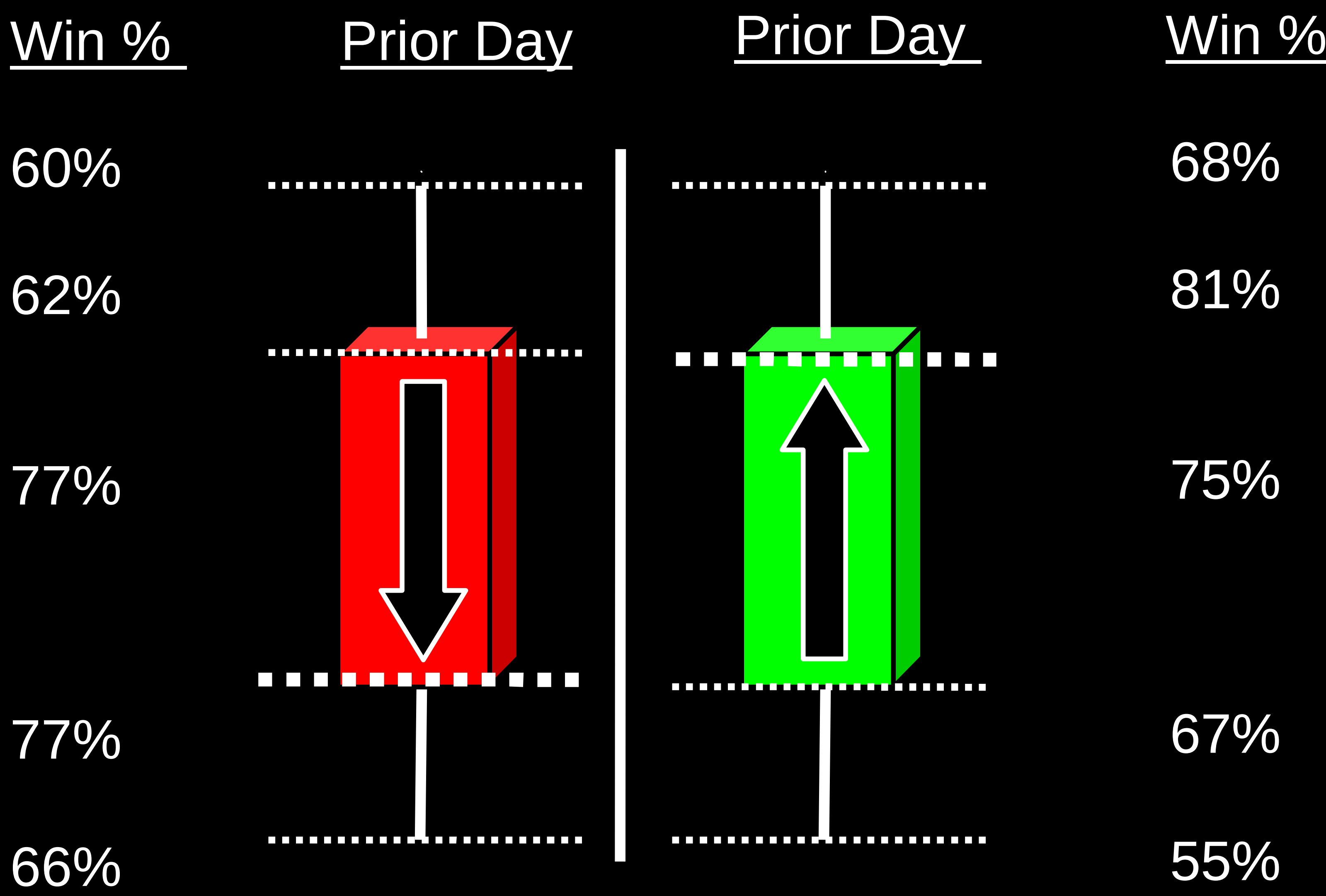
"Win %" is based upon hypothetically fading opening gaps ≥ 1 point in the E-Mini S&P 500 futures, 1998-2007, using no stop, targeting prior close, exiting end of day if gap did not fill. This not a recommended strategy.

Direction of Prior Day Should Be Considered Too



Prior day “direction” incorporates the short term trend.

Gap Fade Win % By Gap Zone



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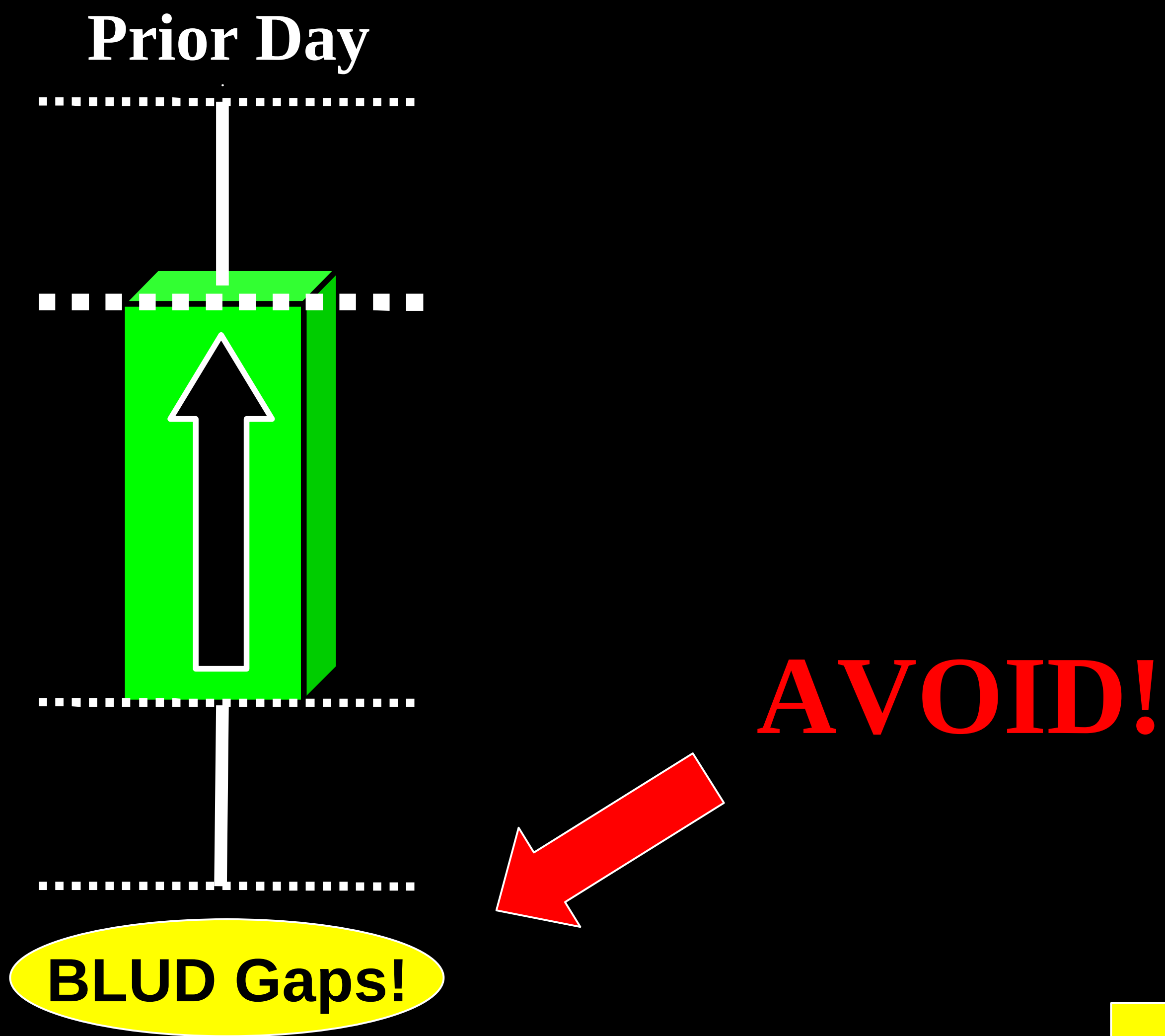
Tip: Avoid Gaps That Open Below the Low of an Up Day



When enter?

Where place my stop?

Execution

What is my profit target?

Entry Timing

Why I Enter At The Open

- ✓ Simplifies execution
- ✓ Minimizes emotion
- ✓ Takes advantage of “rookie” psychology (i.e. those chasing the market)
- ✓ Easier to back-test
- ✓ Focuses the effort on the system (not me)
- ✓ Catches the 30% that begin filling at, or soon after, the open*

*(*note: assumes opening gap size > 20% of 5 day ATR, with 10% of 5 day ATR stop, ES, 1998-2007)*

Target Selection

To Scale Out or Not?

Target % of Gap Fill	% Win Rate	Avg Winning Trade
25%	90.9	$570
50%	84.8	$1,076
75%	78.7	$1,537
100%	74.6	$1,836
125%	70.3	$2,184

***Note**: Fade medium & large opening gaps (> 20% of 5 day ATR) of the E-mini S&P 500 futures, regular trading hours, target = gap fill (prior daily close), no stop, exit at end of day. Results include 1,342 trades from 1998-2008.*

75% chance of $1,836 -or- 85% chance of $1,076

Which would you prefer?

What Else Does This Slide Tell Us?

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It Pays to Stay!

Price often extends beyond (i.e. through) the gap fill.

Stop Placement

Stops

- 25% – 40% of a five day ATR (avg. true range) works well for most indices depending upon the volatility of the security
- 5 – 8 points in the E-mini S&P 500 has worked well historically (~ $.50 – $.80 in the SPY)
- If I increase stop size to accommodate volatility, then I always reduce position size to ensure my max loss per trade is not exceeded
- I never hold trades overnight

Stop size is more of a personal preference than profitability determinant

Summary

- Historical probabilities level the playing field between the "Pros" and the "Joes"
- Trade selection is the key
- Larger stops have many benefits
- It often "pays to stay" (hold beyond initial target)

Thank You

For More Info…

Email: HamzeiSlides@masterthegap.com to:

- ✓ Receive copy of the presentation slides
- ✓ Option to sign up for email list
- ✓ *Option to register for next webinar - December 1:*

  "How to Trade Using MasterTheGap.com"

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