Volume-Spread Analysis (VSA)

Charles Buttermore
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Self Introduction

MBA in Finance & International Business. Worked as an analyst and portfolio manager for RIA firms.

A member of TradersMeetup of Spokane.

Proprietary trader with Patak Trading Partners (via TopStepTrader) for 2.5 years.

Currently a fulltime trader with 10+ years experience. Specializing in Crude Oil futures. Before that, traded long term equity options from a fundamental perspective.

I enjoy sports/fitness, permaculture farming/gardening, autos & racing.
Agenda

- VSA Matrix
- Strategy, Signal Logic
- Discretionary
- Testing & Automation
## VSA Matrix

<table>
<thead>
<tr>
<th>Bar Spread-Narrow/Wide</th>
<th>Volume Increasing</th>
<th>Volume Decreasing</th>
<th>Market Rising</th>
<th>Market Falling</th>
<th>Indication Strength/Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>High volume</td>
<td></td>
<td>High volume</td>
<td>Closing off</td>
<td>Closing off</td>
<td>SSOW ACCUMULATION</td>
</tr>
<tr>
<td>High volume</td>
<td></td>
<td></td>
<td>the lows</td>
<td>the highs</td>
<td>SSOW DISTRIBUTION</td>
</tr>
</tbody>
</table>
Discretionary Strategy: Signal Logic

1. Wide-spread bar

2. Increase in ‘slope’

3. Volume decreases significantly AND price fails to advance
Discretionary Strategy: Considerations

1. Bar color does not matter!
2. Build context -- Stay out of the middle!
3. Match your SL/PT and frequency to the time frame!
Discretionary Strategy: Gold
Discretionary Strategy: Gold
Discretionary Strategy: Crude Oil
Discretionary Strategy: Crude Oil
Testing: Isolate Phenomenon from Historical Sample

SHAPE

Rising Volume
Narrower Spread

Rising Volume
Wider Spread

Falling Volume
Narrower Spread

Equal Volume
Narrower Spread

'SLOPE'

VOLUME DECLINE %
Testing: Quantify Sequence Range
Testing: Quantify Price Pulse
Testing: Quantify Range / Pulse

$SR = PP \div (%)$
Testing: Multi-Dimensional Coordinates

<table>
<thead>
<tr>
<th>Shape</th>
<th>Volume Decline</th>
<th>‘slope’ Coefficient</th>
<th>Energy Proxy</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>vd1</td>
<td>vsc1</td>
<td>v1 v2 v3 v4 (Volume)</td>
</tr>
<tr>
<td>A2</td>
<td>vd2</td>
<td>vsc2</td>
<td>vr1 vr2 vr3 vr4 (Range)</td>
</tr>
<tr>
<td>B1</td>
<td>vd3</td>
<td>vsc3</td>
<td>vp1 vp2 vp3 vp4 (Pulse)</td>
</tr>
<tr>
<td>C1</td>
<td>vd4</td>
<td>vsc4</td>
<td>vrp1 vrp2 vrp3 vrp4 (Range ÷ Pulse)</td>
</tr>
</tbody>
</table>

$4 \times 4 \times 4 \times 4^2 = 1,024$  Four-Element Sets

{ _____ , _____ , _____ , _____ }

Examples:

{A1, vd2, vsc3, vp3}  {B1, vd4, vsc1, vr2}
Testing: Tetrahedron Geometry

Shape

Volume-Decline

Volume-Spread

Coefficient

Energy

Volume

vd1, vd2, vd3, vd4

vsc1, vsc2, vsc3, vsc4

Volume-Decline

Energy

Volume-Spread

Coefficient

Shape
Testing: Measure MAE & MFE

Stop Loss

Profit Target

\[ \text{MAE}_{t_1}, \text{MAE}_{t_2}, \text{MAE}_{t_3} \]

\[ \text{MFE}_{t_1}, \text{MFE}_{t_2}, \text{MFE}_{t_3} \]

\[ t_1, t_2, t_3, t_n \]
Testing: Optimize Clusters

\{A1, vd1, vsc2, vr3\}

Stop Loss

\begin{align*}
\text{Profit Target} &= \text{Winner} \quad \text{Loser} \\
&= \text{Profit Target} \times \text{Contract Size} - \text{Commission} \quad \text{Stop Loss} \times \text{Contract Size} - \text{Commission}
\end{align*}

\begin{align*}
\text{Total Profit} &= \text{(# Winners} \times \text{Profit}) - \text{(# Losers} \times \text{Loss})
\end{align*}

\text{IF: Stop Loss} > \text{MAE}
\quad \text{AND}
\quad \text{Profit Target} \leq \text{MFE}

\text{True} \quad \text{False}

\begin{align*}
\text{Winner} &= \text{Profit Target} \times \text{Contract Size} - \text{Commission} \\
\text{Loser} &= \text{Stop Loss} \times \text{Contract Size} - \text{Commission}
\end{align*}
NOTE: These are not investment recommendations sources, but rather source of reference for you to check (ie. get to know what is out there)

*The Undeclared Secrets that Drive the Stock Market*  
-- Tom Williams

*Making it in the Market & The Wall Street Gang*  
-- Richard Ney

*The Psychology of Technical Analysis*  
-- Tony Plummer

*How the Market Makers Extract Millions of Dollars a Day*  
-- Martin Cole

**YOUTUBE**  
Mark Chapman -- “Trapped Traders”
THANK YOU

Contact Info:

Charles Buttermore

charles@tradersmeetup.net