READING THE LANGUAGE OF THE MARKET WITH MARKET PROFILE

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Structure Perception

What we think determines what we see
Organize Market

Data Representation that best captures what you are trying to see
Data Representation: Price Bar

E-Mini S&P 500, Monthly Price Bar June 2012

- Any price more fair?
- When or Where will it go from here?
Data Organized to Show Usage of Price and Perception of Value

<table>
<thead>
<tr>
<th>Monthly Price Bar</th>
<th>Monthly Bar Organized by Usage</th>
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- Profile = Time spent at Price
- Willingness of Participants to USE Price
- Shows their Perception of Value

E-Mini S&P 500, June 2012
Usage of Price/Time

The more we “Use” price, the more we come to accept that price as fair value.
Usage of Price/Time

Usage Shifts Perception of Value

Chicago Area Gas Prices Per Gallon 10/2005 to 10/2013

96 Month Average Retail Price Chart

Regular Gas Price (US $/G)

Date (Month/Day)

Chicago

©2013 GasBuddy.com
Market Profile

- Market Profile is a visual display that accounts for price and how much time is spent at price.

- Market Profile is a way to track the Progression of Price becoming accepted as value through Usage.

- Usage is the DNA of the Market – it’s the transmitter of market psychology that determines continuation or change in the Market.
Market Profile: Data Representation

Daily Price Bars

Daily Split Profiles

5-Year T-Notes, Feb. 2010

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The process of building Price Acceptance naturally organizes into a Bell Curve

Bell Curve Emerges at Moment Buyers & Sellers Determine Fair Value
The power of Market Profile is in organizing the data to reflect the completion of the Bell Curve and determination of Fair Value.
Market Organized by Completion of Bell Curve

1) Building Fair Value
2) Move Away from Fair Value

Distribution out of Consensus
Profiles are Bell Curves that are vertically oriented.

- **Possible Price Too High**
- **Value Area Top (Top of 2\textsuperscript{nd} SD)**
- **Mode**
- **Value Area Bottom (Bottom of 2\textsuperscript{nd} SD)**
- **Possible Price Too Low**

95% and 68% refer to the Standard Deviation levels:
- **1\textsuperscript{st} SD**
- **2\textsuperscript{nd} SD**
Seeing Determination of Value

Undeveloped Bell Curve = No Consensus

Oct. – Nov. 2009

Developed Bell Curve = Consensus

Oct. 2009 – March 2010

6 Months of Market Activity

Canadian Dollar, Oct. – Nov. 2009
Canadian Dollar, Oct. 2009 – March 2010

Chart Source: CQG, Inc. © All Rights Reserved
Seeing Determination of Value

Consensus is reached and market seeks new value

Determining Value = Range Trade

Acceptance of Value = New Direction

10 days of market activity

Euro, Jan. 2007

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Market Profile Tracks Market Consensus

- The beginning of the auction represents a determination of value.
- The completion of the auction marks the acceptance of value.
- Market consensus looks like a completed Bell Curve.
Clock Time Versus Market Time
Market Time organizes the data into Bell Curves
How do we organize the data to see the progress toward consensus and determine the new direction?
Organizing the Data into Bell Curves

Profiles organized by calendar month

Uniform time increments do not reveal complete cycles of market activity

30-Year T-Bonds, Monthly Profiles, Feb. 2009 – April 2010
Organizing the Data into Bell Curves

Organized by time

Organized by the completion of the Bell Curve

Feb. 2009 – April 2010

Feb.-April 2009 May 2009 – April 2010

30-Year T-Bonds, Feb. 2009 – April 2010

Chart Source: CQG, Inc. © All Rights Reserved
Markets move from High Usage to Low Usage
Conjoined Bell Curves Create Context of Unexplored Value

Completed Profiles are conjoined

Construction of a larger Bell Curve begins

Chart Source: CQG, Inc. © All Rights Reserved
Organizing the Data into Bell Curves

Play for range trade until the Bell Curve is complete

Consensus is reached – need to put into context...

7 Months of Trading

End of Jan – End of July 2011

January – July 2011

XLE – Energy Sector SPDR, Jan. – July 2011
Look for Matching or Greater Mode

Current High Usage Area
Value Extreme

Prior High Usage Area

Pocket of Low Usage
created by combining prior data defines new range


Chart Source: CQG, Inc. © All Rights Reserved
Value Extremes Bracket Price Extremes

Combine prior data to reveal context for future development

Pocket of Low Usage

Ledge of High Usage

Is this conjoined Bell Curve fully developed?

July 2009-July 2011


Chart Source: CQG, Inc. © All Rights Reserved
Development within Pocket of Low Usage

Remains trapped in this pocket for 9 more months

Filling in pocket of low usage
Organizing the Data

- A full Cycle of Market Activity is when the market completes a Bell Curve.

- Once the Bell Curve is complete, a new directional move begins in search of either new value or will explore prior under-developed value areas.

- In order to anticipate the new direction, the completed Bell Curve is put into context of a larger incomplete Bell Curve.

- We look for where low usage areas exist that are either above or below the completed Bell Curve to determine the next directional move.
Complete Bell Curve: Ready to Seek New Value

Developed Bell Curve in context offers Strategy:

- Pockets of low usage above or below?
- Likely direction?
- Target expectations?
- What tells us we’re wrong?

Chart Source: CQG, Inc. © All Rights Reserved
Exploring Context of Under-Developed Value

Chart Source: CQG, Inc. © All Rights Reserved

After phase of development in the upper pocket, further decline to the lower mode
Conjoin Bell Curves for Context

Crude Spread: Long Z14 / Short Z15

(A) Developed = Need Context

(B) Prior Development

Combine prior Bell Curve from the point of the last initiation to reveal context for next likely phase of development

Pocket of Low Usage


Chart Source: CQG, Inc. © All Rights Reserved
Range Trade Underdeveloped Pocket

10 Days of Development within Pocket of low usage

Aug. 26th – Oct. 2nd
Oct. 2nd – Oct. 16th

Pocket of Low Usage Filled In

Buy Against Lower Ledge of High Usage

Sell Against Upper Ledge of High Usage

Pocket fully developed


Chart Source: CQG, Inc. © All Rights Reserved
Building a Trading Strategy with Bell Curves

- Range Trade underdeveloped Bell Curves until they are complete.

- Conjoin completed Bell Curves into a larger under-developed context.

- Trade for Development of low-usage areas until the larger under-developed context is integrated into a completed Bell Curve.
GOLD

April 2011 to Current
Range Trade Underdeveloped Bell Curve

Large Pocket of Low Usage

1500
1550
1775
1825

New Value Area Top?
New Value Area Bottom?

Elements of a Strategy:

- Direction
- Trend/Consolidation
- Entry Location
- Target and Stop
- Duration of Strategy
- Alternative Scenario

Gold, April – September 2011

Chart Source: CQG, Inc. © All Rights Reserved
## Range Trade Underdeveloped Bell Curve

### Chart Source: CQG, Inc. © All Rights Reserved

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<tr>
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<th>April – Sep. 11</th>
<th>September 2011 – January 2013</th>
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<tr>
<td>Sell Value Area Top</td>
<td>1825</td>
<td>1775</td>
</tr>
<tr>
<td>Buy Value Area Bottom</td>
<td>1500</td>
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**16 months of development within the long-term pocket of low usage**

**What do we need now?**

**Gold, April 2011 – January 2013**
Conjoin Bell Curves for Context

Gold, September 2010 – February 2013

Sep. 10 – April 11

April 2011 – Feb. 2013

Prior High Usage Area

1425

1325

Pocket of Low Usage

Ripe to move directionally out of Mode

Chart Source: CQG, Inc. © All Rights Reserved
Conjoin Bell Curves for Context: Comparing Modes of Bell Curves

What’s our strategy?

Current mode (A) has overcome the last 2 prior modes

 Longer-Term Context

Pocket of Low Usage

Gold, September 2010 – February 2013

Gold, October 2009 – February 2013
Conjoin Bell Curves for Context
Comparing Modes of Bell Curves

Gold, September 2007 – July 2013
Gold, October 2009 – July 2013

Decline from mode in Feb. 2013, then break into low usage pockets in April

Do we buy low or sell high? What's our ultimate target?

Prior high usage ledge greater than mode of (A)
Foreground and Background Congruent Consensus

After 17 months of development the Foreground Bell Curve is complete.

Sell opportunities against the developing top of value as the current range developed.

Gold, September 2007 – September 2014
Foreground and Background Congruent Consensus: Readiness to Move

Development from April 2013 – Sep. 2014

Both Foreground & Background Bell Curves are complete

Gold, September 2007 – September 2014
30-Year

May 2012 to Current
30-Year T-Bonds, August 2011 – June 2012

New value range created by mid-2012 rally above prior fair value range

Elements of a Strategy:
- Direction
- Trend/Consolidation
- Entry Location
- Target and Stop
- Duration of Strategy
- Alternative Scenario

Chart Source: CQG, Inc. © All Rights Reserved
Range Trade Underdeveloped Bell Curve

8 Months of development within the new value range

30-Year T-Bonds, August 2011 – December 2012

Developed = What do we need?
Conjoin Bell Curves for Context: Comparing Modes of Bell Curves

Combining prior value area to reveal context for next potential phase of development

Direction of prior initiation tells you “who’s in control”

Pocket of Low Usage

30-Year T-Bonds, August 2011 – December 2012
Conjoin Bell Curves for Context: Comparing Modes of Bell Curves

January through May 2013 spent filling in upper pocket of low usage

Pocket of Low Usage

Deep Pocket of Low Usage

What’s our Strategy?

Longer-Term Context

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Break of 140 led to the decline to the 129 ledge, and development within the low usage pocket.
Background Foreground Both Lack Consensus
Sugar

Dec. 2010 to Current
Range Trade Underdeveloped Bell Curve

After 4 months of development
Bell Curve complete = Need context

Sugar, December 2010 – March 2011
Conjoin Bell Curves for Context: Comparing Modes of Bell Curves

Profile (A) is fully developed...

Is combined context fully developed?  Strategy?  Bias?

Pocket of Low Usage

Deep Pocket of Low Usage

Sugar, October 2007 – March 2011

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Conjoined Background and Foreground Bell Curves Reveal Consensus

Nearly 1 year for a range trade strategy until Background Bell Curve is complete

Now what’s our Strategy?

Sugar, October 2007 – April 2012

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Conjoined Background and Foreground Bell Curves Refine Strategy

Conjoined Profiles highlight remaining low usage pocket

Sugar, October 2007 – February 2013

Chart Source: CQG, Inc. © All Rights Reserved
After 18 months of development the current Bell Curve is Complete

Sell opportunities against the developing top of value as the current range developed
**Conjoined Bell Curves Reveal Strategy**

**Sugar, October 2007 – September 2014**

- **August decline from mode out of completed Bell Curve**
- **Target of lower ledge reached**

**Longer-Term Context**

- **Bringing in data back to 1996 reveals a larger mode**

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Recap:

- Range Trade underdeveloped Bell Curves until they are complete. Keeping in mind the progression of development in both the Foreground and Background.

- Conjoin completed Bell Curves into a larger underdeveloped context.

- Trade for Development of low-usage areas until the larger under-developed context is integrated into a completed Bell Curve.

- Find Larger Context and Start Process again.
Sector Analysis
Sector Selection Based on Price Usage

US Info Tech Sector ETF (XLK)

US Financial Sector ETF (XLF)


Sep. 2011 - May 2013

July 2012 – May 2013

XLK – US Info Tech Sector SPDR ETF,
Dec. 1998 – May 2013

XLF – US Financial Sector SPDR ETF,
Dec. 1998 – May 2013
Sector Selection Based on Price Usage


Stock Selection
Insider Buy Portfolio – Regional Bank Holdings
Pocket of Low Usage Out of a completed Bell Curve

May Financial Stocks had already began their recovery off of the bottom of value by May 2013

1989 – May 2013


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## Insider Buy Portfolio – Regional Bank Holdings

Pocket of Low Usage Out of a completed Bell Curve

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Insider Buy Portfolio - Info Tech Holdings
Pocket of Low Usage Out of a completed Bell Curve

In May 2013 many Tech Stocks had yet to separate from a lower mode

1994 – May 2013
1993 – May 1994
1998 – May 2013

Triquint Semiconductor Inc. (TQNT), 1993 – May 2013
Electronic Arts (EA), 1994 – May 2013
International Rectifier Corp. (IRF), 1994 – May 2013

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Insider Buy Portfolio - Info Tech Holdings
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