

## iMatrix

iMatrix is an useful tool for investor to gain an in-depth view of the stock movement. You can view the individual trades done and the trade summary for the market day. In addition, iMatrix offers the historical and intra-day charting as well. There are 2 ways to access this:

1.

China Hongx	BR9	<a href="#">i</a>	--	SGD	0.705 ▲
Yangzijiang	BS6	<a href="#">i</a>	--	SGD	1.350 ▼
JiutianC	C8R	<a href="#">i</a>	--	SGD	0.250 ▼

Click [i](#) to launch iMatrix

2.

China Hongx	BR9	<a href="#">i</a>	--	SGD	0.705 ▲
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JiutianC	C8R	<a href="#">i</a>	--	SGD	0.250 ▼

Right click on the stock name

Access all the iMatrix features

- Buy
- Sell
- Bid & Ask
- Times & Sales
- Trade Summary
- Queue Track
- Charting
- Reports
- Calculator
- Add to Watchlist
- Alert Criteria Setting

□ **iMatrix features**

• **Bid & Ask\***

View the “live” buy and sell queue of the counter

\* Subject to Terms & Conditions

039 (OCBC Bk)					
Day Hi	7.160	Last	7.110	Vol	5,090,000
Day Lo	7.070	\$Chng	-0.030		
Bid & Ask	Time & Sales	Trade Summary	Queue Track	Charting	
Bid	Bid Vol	Ask	Ask Vol		
7.100	12,000	7.110	62,000		
7.090	128,000	7.120	58,000		
7.080	121,000	7.130	60,000		
7.070	110,000	7.140	29,000		

**Bid** – Buy price

**Bid Vol** – Total volume for Buy price

**Ask** – Sell price

**Ask Vol** – Total volume for Sell price

- **Time & Sales**

This feature captures each trade done for the counter. You can retrieve the historical information up to 6 calendar days.

**039 (OCBC Bk)**

Day Hi  Last  Vol   
 Day Lo  \$Chng

2008-02-12 ▾

Last Retrieved on Tue, Feb 12 2008 at 03:55 PM from IOCBC servers.

Time	Price	Trade Size	Bid-Ask
15:53:00	7.110	1,000	Sold To Buyer
15:53:00	7.110	27,000	Bought From Seller
15:53:00	7.110	73,000	Sold To Buyer
15:52:00	7.100	24,000	Bought From Seller
15:52:00	7.110	2,000	Sold To Buyer
15:50:00	7.100	60,000	Bought From Seller

**Time** – The time which the trade is done

**Price** – The price which the trade is done

**Trade Size** – The total volume of trade done

**Bid-Ask** – Narration of the sales closed

- **Trade Summary**

This feature summarizes the Time & Sales in terms of price, trade and volume. You can retrieve the historical information up to 6 calendar days.

Bid & Ask	Time & Sales	<b>Trade Summary</b>	Queue Track	Charting	
2008-02-12 <input type="button" value="v"/>					
Last Retrieved on Tue, Feb 12 2008 at 03:55 PM from IOCBC servers.					
Price	Trades	Volume	Sold to Buyer	Mid	Bought from Seller
7.070	3	19,000	19,000	0	0
7.080	28	273,000	172,000	0	101,000
7.083	1	100,000	0	100,000	0
7.090	187	1,312,000	730,000	0	582,000
7.100	87	866,000	405,000	0	461,000
7.103	1	30,000	0	30,000	0
7.110	98	846,000	354,000	67,000	425,000
7.120	138	694,000	258,000	0	436,000
7.130	98	533,000	223,000	0	310,000
7.140	48	242,000	77,000	0	165,000
7.150	7	150,000	11,000	108,000	31,000
7.160	4	23,000	1,000	0	22,000
<b>TOTAL</b>	<b>700</b>	<b>5,088,000</b>	<b>2,250,000</b>	<b>305,000</b>	<b>2,533,000</b>
<b>Weighted Avg Price : 7.1071</b>		<b>Avg Trade Size : 7,268.571</b>		<b>Spread/Price Ratio : 1.0000</b>	

- Price** – The price which the trade is done
- Trades** – Number of trades done
- Volume** – Total volume done
- Sold to Buyer** – Total Sell volume
- Bought from Seller** – Total Buy volume



- **Charting**

View and plot intra-day & historical share price movements.

**039 (OCBC Bk)**

Day Hi: 7.150    Last: 7.150    Vol: 5,548,000

Day Lo: 7.070    \$Chg: +0.010

Bid & Ask    Time & Sales    Trade Summary    Queue Track    **Charting**

**Charting**

Click [Help](#) for more info

To add indicators

2007    Jul

Feb 13, 2008 O=7.24 H=7.24 L=7.17 C=7.18 V=518

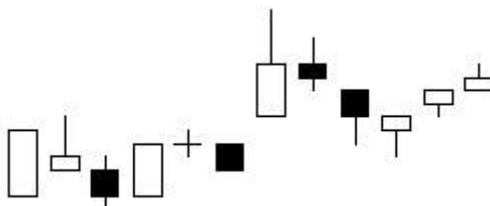
Open	Volume traded
Day High	Closing price
Day Low	

### How to read filled and hollow candle:

1. **Filled Bar** - Closing price of current bar is lower than Opening price of the current bar. (Close < Open)
2. **Hollow Bar** - Closing price of current bar is higher than Opening price of the current bar. (Close > Open)

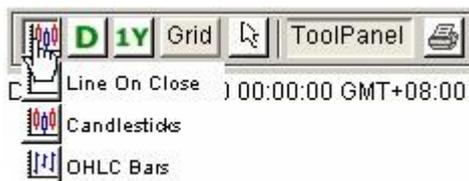
### How to read color on candle:

1. **White Candle** - Closing price for current bar is higher than previous bar closing price. (Current Close > Previous Close)
2. **Black Candle** - Closing price for current bar is lower than previous bar closing price. (Current Close < Previous Close)



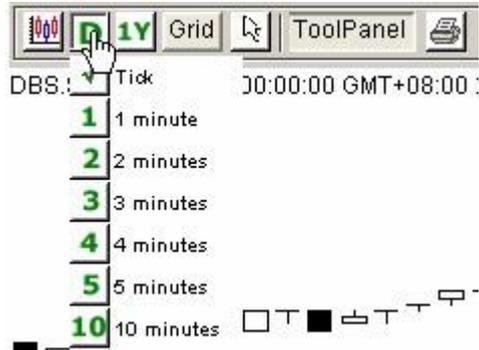
### Changing Chart Type

1. Click on **Chart Type** Icon on the toolbar to change the chart type.



## Changing Chart Period (Compression)

1. Click on **Period Icon** on the toolbar to change chart time frame.



## Changing Historical Data Period

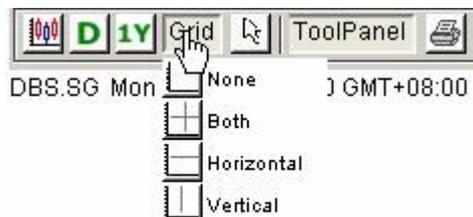
1. Click on **Days Back** icon on the toolbar to change chart historical data period.



- ☑ Note: 1. **Tick** chart allows you to see data range of up to 3 days.
- 2. **5 Minutes** chart allows you to see data range of up to 30 days.
- 3. **30 Minutes** chart allows you to see data range of up to 180 days.
- 4. **Daily** chart allows you to see data range of up to 15 Years.

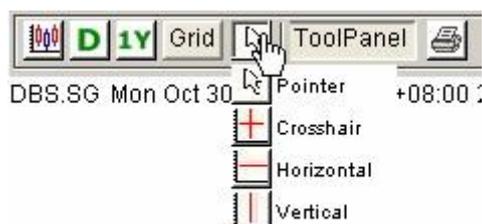
## Adding Grid Lines

1. Click on **Grid** lines on the toolbar to add grids to chart.



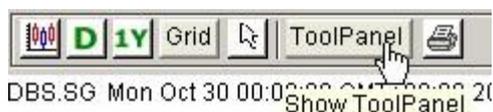
## Changing Cursor Type

1. Click on the **Cursor Type** on the toolbar to select desired cursor type.



## Showing / Hiding the Tool Panel

1. Click on **ToolPanel** button on the toolbar to show/hide the **Tool Panel**.



## Changing Colors and Fonts

1. On **Tool Panel**, click on **Settings** tab. Click on the color palettes to change the colors.



## 1. Bollinger Bands

- An indicator which uses the technique of using moving averages with two trading bands to compare volatility and relative price levels over a period of time.
- It consists of a centerline (Mid Band) and two price channels called Top Band and Low Band.
- The centerline is an exponential moving average, and the two price channels are the standard deviations of the stocks.
- Band expands when market becomes volatile, and contracts when there's a tight trading pattern.
- The more overbought the market is, the closer the prices will move to the upper band; The more oversold the market is, the closer the prices will move to the lower band.

## 2. Moving Average

- It shows the average value of a stock price over a period of time. When calculating a moving average, a mathematical analysis of the stock's average value over a predetermined time period is made. As the stocks price changes, its average price moves up or down.
- Simple moving averages apply equal weight to the prices.

## 3. Exponential Moving Average

- Exponential and weighted averages are types of moving average that is similar to a simple moving average, except that more weight is given to the latest data.

## 4. Weighted Moving Average

- The weighted moving average is calculated by averaging together the previous values over the given period, including the current value.
- These values are weighted linearly, with the oldest value receiving a weight of 1, the next value receiving a weight of 2, and so on up to the current value, which receives a weight equal to the period.

## 5. Price Channel

- A price channel is a continuation pattern that slopes up or down and is bound by an upper and lower trend line.
- The upper trend line marks resistance and the lower trend line marks support.
- Price channels with negative slopes (down) are considered bearish and those with positive slopes (up) bullish.
- For explanatory purposes, a "bullish price channel" will refer to a channel with positive slope and a "bearish price channel" to a channel with negative slope.

## 6. Momentum ((Rate-Of-Change/ROC)

- A relatively straightforward indicator that measures the rate of the rise or fall in stock prices.
- It measures amount that a stock price has changed over a given time span.
- The conventional interpretation is to use momentum as a trend-following indicator, which means that when the indicator peaks and begins to descend, it can be considered a sell signal. The opposite conditions can be interpreted when the indicator bottoms out and begins to rise.
- If momentum reaches very high or low values relative to its range historically, a continuation of the current trend is likely, and a change might not be considered until the actual price begins to dip down or rise, respectively.

## 7. Money Flow Index

- A momentum indicator that measures the strength of money in and out of a security. I.e. It calculates an indexed value based on price and volume for the number of bars specified in the input Length.
- A divergence between the MFI and price trend can be interpreted as a possible trend reversal.
- It is similar to the Relative Strength Index (RSI). The difference is that the MFI also accounts for volume, whereas the RSI only incorporates prices.

## 8. Price ROC (Price Rate-Of-Change)

- It measures the percentage change between the most recent price and the price "n" periods in the past.
- As prices increase, the ROC rises; As prices fall, the ROC falls.
- The greater the change in prices, the greater the change in the ROC.
- The difference can be displayed in either points or as a percentage.

## 9. O.B.V (On Balance Volume)

- An indicator to measure positive and negative volume flow.
- The idea behind the OBV indicator is that changes in the OBV will precede price changes.
- A rising volume can indicate the presence of smart money flowing into a security.
- Like other indicators, the OBV indicator will take a direction.
- A rising (bullish) OBV line indicates that the volume is heavier on up days. If the price is likewise rising, then the OBV can serve as a confirmation of the price uptrend. In such a case, the rising price is the result of an increased demand for the security, which is a requirement of a healthy uptrend.

## 10. R.S.I

- A technical momentum indicator that compares the magnitude of recent gains to recent losses in an attempt to determine overbought and oversold conditions of an asset.
- It compares the price of a security relative to itself.
- The RSI is based upon the difference between the average of the closing price on up days vs. the average closing price on the down days over a given period, and is plotted on a vertical scale of 0 to 100.

## 11. MACD

- MACD (Moving Average Convergence/Divergence) is a momentum indicator that shows the relationship between two moving averages of prices, i.e. It tells you what the prices are doing (i.e. rising or falling) so that you can invest accordingly.
- MACD is constructed from the division of one MA by another.
- It consists of the components MACD, ExpMovAvg and MACD Diff.
- The MACD is the difference between a 26-day and 12-day exponential moving average.
- Is most effective in wide-swinging trading markets.
- There are 3 ways to use to use MACD, namely crossovers, overbought/oversold conditions, and divergences.
- Crossovers: To sell when the MACD falls below its signal line, and to buy when the MACD rises above the signal line.
- Overbought/oversold conditions: Is useful as an overbought/oversold indicator. When the MACD rises dramatically, i.e. when the shorter moving average pulls away from the longer-term moving average, it is a signal that the stock is overbought and will soon return to normal levels.
- Divergences signal the end of the current trend.

## 12. Stochastic

- A technical momentum indicator that compares a stocks closing price to its price range over a given time period.
- The oscillator's sensitivity to market movements can be reduced by adjusting the time period or by taking a moving average of the result.

## 13. Volume

- Volume is simply the number of shares (or contracts) traded during a specified time frame (e.g., hour, day, week, month, etc).
- The analysis of volume is a basic yet very important element of technical analysis.
- Volume provides clues as to the intensity of a given price move. i.e.If a buyer of a stock purchases 100 shares from a seller, then the volume for that period increases by 100 shares based on that transaction.

#### 14. Williams %R

- Williams' %R is a momentum indicator that measures overbought/oversold levels.
- Typically, Williams' %R is calculated using 14 periods. However, the timeframe and number of periods may vary according to the desired sensitivity and the characteristics of the security.