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Market Profile Basics

Every off-floor trader would like to get a feel for how things really are on the exchange floor. Mastering Market Profile may help you get it.

by Jayanthi Gopalakrishnan

W orried that you'll never be able to compete with the floor traders? After all, they're right there in the middle of the action. They're privy to information that off-floor traders see late or maybe never. Once you start using Market Profile, however, you may find yourself with *more* information than the floor trader. No longer will floor traders, decked out in their colored jackets, frantically gesturing and scrambling to make themselves heard and seen by other traders, seem chaotic, intimidating, or bizarre. Instead, with the use of Market Profile, you will see the order in the markets.

J. Peter Steidlmayer developed Market Profile in the 1980s in conjunction with the Chicago Board of Trade. Traders who use it say that they get an in-depth understanding of the market, contributing to improved trading. Many factors can be monitored from Market Profile.

Market Profile is not an indicator in the typical sense. It does not provide buy/sell recommendations but acts more like a decision-support tool. It organizes the data so that you can understand who is in control of the market, what is perceived as fair value, and the direction of the price move. It is possible to extract enough information from Market Profile for you to position your trades more advantageously.

Market Profile is useful for the pit trader as well as the off-floor trader. The indicator can help the off-floor trader get a better sense of the market; prior to the introduction of Market Profile, only floor traders had access to this information. Although all references here refer to using futures contracts, Market Profile can be used just as effectively for other tradables. Software vendors such as Cqg and WindoTrader provide Market Profile displays for equities.

IN THEORY

The concept of Market Profile stems from the idea that markets have a form of organization determined by time, price, and volume. Each day, the market will develop a range for the day and a *value area*, which represents an equilibrium point where there are an equal number of buyers and sellers. In this area, prices never stay stagnant. They are constantly diverging, and Market Profile records this activity for traders to interpret.

Market Profile is based on the normal distribution curve, wherein approximately 70% of the values fall within one
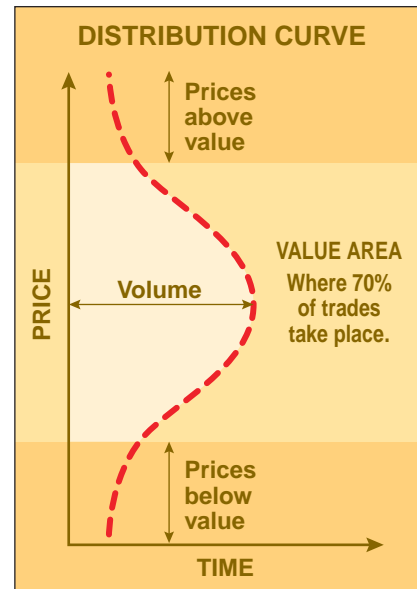

FIGURE 1: MARKET PROFILE STRUCTURE. The structure of Market Profile follows that of a normal distribution curve of price occurrences.

standard deviation of the average. If you rotate the normal distribution curve so that price is along the vertical axis and time on the horizontal axis (as shown in Figure 1), you have the structure of Market Profile.

A normal distribution curve assumes that the number of occurrences follow a bell-shaped curve. Anyone who has traded in the markets, however, knows that prices never follow a definite pattern; in fact, you rarely see a normal distribution. What you *do* see are skewed distribution of prices, which makes it possible to see the price at which most of the trades actually took place. This provides significant clues about the direction of prices and is the groundwork for understanding Market Profile. In theory, this helps the trader identify where prices are in relation to values.

Monitoring price distribution over time gives insight into what levels are considered fair and unfair. You may take advantage of this information and identify good trading opportunities.

Volume is the key to understanding Market Profile. If prices move away from the value area but volume starts to dry

4590	F
4586	F
4584	DF
4582	DF
4580	DE
4576	DE
4574	YDE
4572	YDE
4570	YDE
4566	YDE
4564	YDE
4562	YDE
4560	YDE
4554	YDE
4552*	YD
4550	YD
4544	D
4540	D

DOUBLE-DISTRIBUTION DAY
Oct. '99 crude oil (CEC-NYM), 8/31/99

2230	G
2225	G
2224	GKL
2223	GKL
2222	GKL
2221	GKL
2220	GKL
2219	GKL
2218	GJKL
2217	GJKL
2216	GJKL
2215	FGJKL
2214	FGHJKL
2213	FGHJKL
2212	FGHIJL
2211	FGHIJL
2210	FGHIJL*
2209	FGHIJL
2208	FGHIJL
2207	FGHIJL>
2206	FGH
2205	F
2204	F
2203	F
2202	F
2201	F
2200	BF
2199	BF
2198	BDEF
2197	BCDEF
2196	BCDEF
2195	BCDEF
2194	BCDEF
2193	BCDEF
2192	BCDEF
2191	BCDEF
2190	BCDEF
2189	BCDEF
2188	BCDEF
2187	BCDE
2186	BCDE
2185*	BCE
2184	BCE
2183	BCE
2182	BE
2180	B
2179	B
2178	B
2154	B

PRICE RANGE

KERRY TALBOT

up, it is likely that prices will move back to the value area. Such a movement indicates that sellers are not happy that prices are below value and buyers are not happy that prices are above value. Trading activity may increase only when prices return to the value area.

If, on the other hand, prices diverge from the value area with increasing trading activity, that indicates market participants are reevaluating their idea of value. By observing market activity through Market Profile, you can get a grasp of who is in control of the market and determine which way the market is likely to move.

WATCHING IT DEVELOP

The development of Market Profile can be seen during the course of the trading day in Figure 2. Market Profile is made up of *time price opportunities* (Tpos), which are represented by letters. Each letter represents one half-hour of the trading day (but beware that the letters used to represent time periods are not consistent across vendors). In the example in Figure 2, the periods are represented with letters *A* to *J*, with A being the first half-hour.

The first hour of trading sets the general pattern for the day and is your first opportunity to view market activity. This period is important for determining what the floor traders are doing; those traders are trying to find a price at which both the buyer and seller agree to make a trade. There are two broad categories of market participants: the *day-timeframe trader* and the *other-timeframe trader*. The floor trader is referred to as the day-
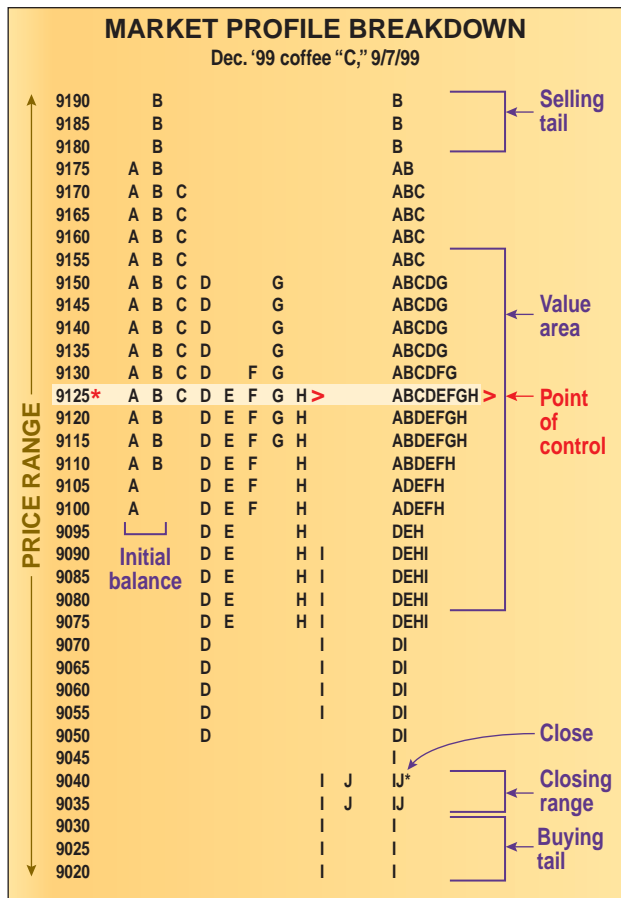
MARKET PROFILE BREAKDOWN
Dec. '99 coffee "C," 9/7/99

PRICE RANGE												
9190		B								B		Selling tail
9185		B								B		
9180		B								B		
9175	A	B								AB		
9170	A	B	C							ABC		
9165	A	B	C							ABC		
9160	A	B	C							ABC		
9155	A	B	C							ABC		
9150	A	B	C	D			G			ABCDG		
9145	A	B	C	D			G			ABCDG		Value area
9140	A	B	C	D			G			ABCDG		
9135	A	B	C	D			G			ABCDG		
9130	A	B	C	D		F	G			ABCDFG		
9125*	A	B	C	D	E	F	G	H >		ABCDEFGH >		Point of control
9120	A	B		D	E	F	G	H		ABDEFGH		
9115	A	B		D	E	F	G	H		ABDEFGH		
9110	A	B		D	E	F		H		ABDEFH		
9105	A			D	E	F		H		ADEFH		
9100	A			D	E	F		H		ADEFH		
9095				D	E			H		DEH		
9090	Initial		D	E			H	I		DEHI		
9085	balance		D	E			H	I		DEHI		
9080				D	E			H	I		DEHI		
9075				D	E			H	I		DEHI		
9070				D					I		DI		
9065				D					I		DI		
9060				D					I		DI		
9055				D					I		DI		
9050				D					I		DI		Close
9045									I		I		
9040							I	J		IJ*		Closing range
9035							I	J		IJ		
9030									I		I		
9025									I		I		Buying tail
9020									I		I		

FIGURE 2: MARKET PROFILE BREAKDOWN. Market Profile is made up of time price opportunities (TPOs), which are represented by letters. Each letter represents one half-hour of the trading day and is placed at each price level occurring during that time.

The height of the entire profile — that is, the high to the low — is known as the *range*. In this example, the range is $90.20 to $91.90, which is wider than the initial balance.

On occasion, prices go above or below the initial balance. This is known as a *range extension*. In this example, the range extends below the initial balance, indicating a seller range extension.

The price range where 70% of the trading activity takes place, one standard deviation from the mean, is the value area. In this example, it is the area between $90.80 and $91.55. Calculation of this area is covered in more detail in the sidebar, "Value area calculation." This is where the bell curve comes in. The value area reflects the acceptance level of a certain price range or balance area. Any attempt to move prices away could provide important clues to direction.

The *point of control* is the longest line of Tpos closest to the center of the range. In Figure 2, $91.25 represents the point of control. This is where most of the trading activity took place and is considered to be a fair value for the trading day.

J period is the *closing range* and designates the day's close. Here, it is $90.40. The closing price is important because you need it as a reference point for the following day's opening activity.

When you have a series of single letters on either extreme, it is known as a *single-print buying/selling tail*. The presence of such a tail indicates a strong reaction by the other-timeframe traders. In this case, both single-print buying and selling tails are present. Since both are very short — only three letters — the response from the other-timeframe traders was very strong. The buying tail represented by the three I periods shows that the other-timeframe buyer responded quickly to lower prices. Conversely, the three Bs at the top of the profile indicates that the other-timeframe sellers responded quickly when the prices were above value.

RECOGNIZING DIFFERENT DAYS

Now that you know how a profile develops, it's time to examine the different types of days you might encounter. There are several types of profiles, and you should be able to recognize the shapes associated with the different types of
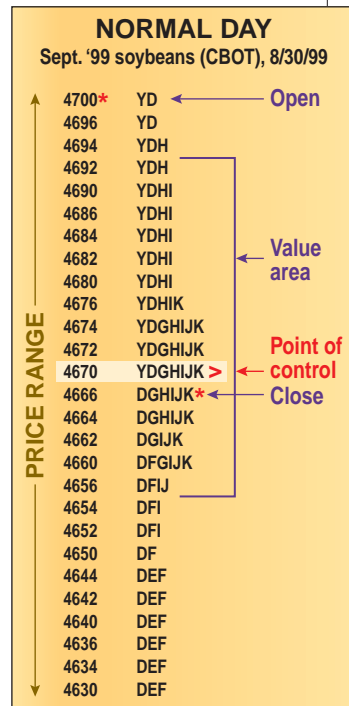
NORMAL DAY
Sept. '99 soybeans (CBOT), 8/30/99

PRICE RANGE		
4700*	YD	Open
4696	YD	
4694	YDH	
4692	YDH	
4690	YDHI	
4686	YDHI	
4684	YDHI	
4682	YDHI	Value area
4680	YDHI	
4676	YDHIK	
4674	YDGHIJK	
4672	YDGHIJK	Point of control
4670	YDGHIJK >	
4666	DGHIJK*	Close
4664	DGHIJK	
4662	DGIJK	
4660	DFGIJK	
4656	DFIJ	
4654	DFI	
4652	DFI	
4650	DF	
4644	DEF	
4642	DEF	
4640	DEF	
4636	DEF	
4634	DEF	
4630	DEF	

FIGURE 3: PROFILE OF A NORMAL DAY. A wide initial balance and a relatively balanced market characterize a normal day. The TPOs are represented by DEFGHIJK. The Y period represents trading prior to the open.

timeframe trader and all others as other-timeframe. The latter trader type provides market direction by moving prices to new levels, whereas the former is interested in trading large volumes on few ticks. They provide liquidity to the markets.

The *initial balance* is the price range of market activity during the first hour (the first two time periods). In Figure 2, this is represented by A and B. On September 7, 1999, the initial balance for the December 1999 coffee contracts was established in the first two half-hour periods between $91.00 and $91.90. A wide initial balance suggests that prices will stay within the range, whereas a narrow one suggests that prices may extend beyond it. The ability to differentiate between the two will only be possible after some experience. If the price range falls outside the the range set by the initial balance, there is the suspicion that the other-timeframe trader has entered the market and tried to move prices away from the area of balance.

During D period, the other-timeframe seller entered the market and drove prices lower. However, during the subsequent periods, buyers entered the market and drove prices higher. In H, the seller entered again and held control till the close, as can be seen by the activity during I and J periods.

VALUE AREA CALCULATION

Value area can be calculated using either volume or time price opportunity (TPO) count. Here's the calculation using the TPO count:

1. Count the total number of TPOs, including single prints.
2. Calculate 70% of this number.
3. Identify the point of control (the longest line of TPOs closest to the center of the range) and note its TPO count.
4. Add the TPOs of the two prices above and below the point of control. The TPOs of the two with the greater number should be added to the TPOs of the point of control.
5. Continue this process till the total number of TPOs counted reaches 70% of the total number of TPOs.

The same methodology can be used to calculate the value area using volume. See sidebar Figure 1 for the application of the calculation.

Total TPOs = 131
70% of 131 = 91.7
TPOs of the point of control = 11
TPO count: 11 + 20 + 18 + 16 + 14 + 9 + 6 = 94
Value area = $21.48 to $21.59

—J.G.

VALUE AREA CALCULATION
Oct. '99 crude oil, 8/24/99

PRICE RANGE			VALUE AREA
2165	C		
2164	CE		
2163	CE		
2162	BCDE		
2161	BCDE		
2160	BCDE		
2159	BCDE		
2158	BCDEJ	9	
2157	BCDEFJK		
2156	BCDEFGIJK	16	
2155	BCDEFGHIJKL>	11	
2154	BCDFGHIJKL		
2153*	BCDFGHIJKL	20	
2152	BCFGHIJKL		
2151	BCFGHIJKL	18	
2150	BCFGHIKL*		
2149	BCFIKL	14	
2148	BCFIKL	6	
2147	BIL		
2146	BIL		
2145	BIL		
2144	BI		
2143	BI		
2142	BI		
2141	BI		
2140	BI		
2130	I		

SIDEBAR FIGURE 1: VALUE AREA CALCULATION. The value area is calculated using the TPO counts at price levels above and below that level with the most TPOs.
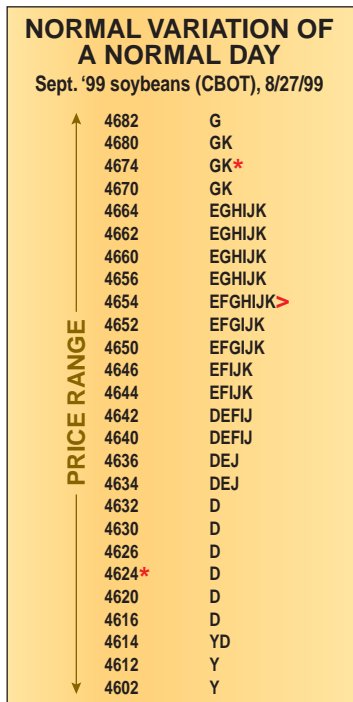
NORMAL VARIATION OF A NORMAL DAY
Sept. '99 soybeans (CBOT), 8/27/99

PRICE RANGE		
	4682	G
	4680	GK
	4674	GK*
	4670	GK
	4664	EGHIJK
	4662	EGHIJK
	4660	EGHIJK
	4656	EGHIJK
	4654	EFGHIJK>
	4652	EFGIJK
	4650	EFGIJK
	4646	EFIJK
	4644	EFIJK
	4642	DEFIJ
	4640	DEFIJ
	4636	DEJ
	4634	DEJ
	4632	D
	4630	D
	4626	D
	4624*	D
	4620	D
	4616	D
	4614	YD
	4612	Y
	4602	Y

FIGURE 4: NORMAL VARIATION OF A NORMAL DAY. The profile indicates activity during the early trading hours followed by a range extension. This implies that the other-timeframe trader entered the market after watching it for a while. D represents the first half-hour period. The Y period represents trading prior to the open.

TREND DAY
Sept. '99 soybeans (CBOT), 8/23/99

PRICE RANGE		
	4664	K
	4662	K
	4660	K
	4656	JK*
	4654	JK
	4652	JK
	4650	JK
	4646	J
	4644	J
	4640	J
	4636	J
	4634	J
	4630	J
	4626	J
	4624	IJ
	4622	I
	4620	FI
	4614	FHI
	4612	FGHI
	4610	FGHI
	4606	FGHI
	4604	FGHI >
	4602	FGHI
	4600	FGHI
	4596	FI
	4594	FI
	4590	F
	4586	F
	4584	DF
	4582	DF
	4580	DE
	4576	DE
	4574	YDE
	4572	YDE
	4570	YDE
	4566	YDE
	4564	YDE
	4562	YDE
	4560	YDE
	4554	YDE
	4552*	YD
	4550	YD
	4544	D
	4540	D
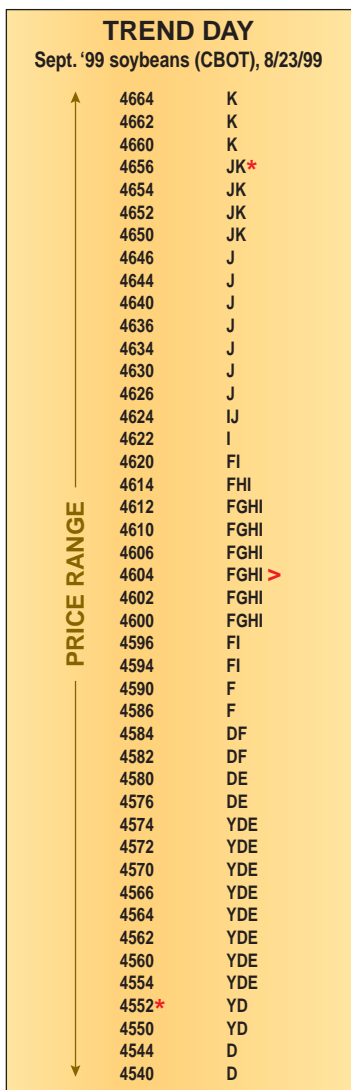
FIGURE 5: STANDARD TREND DAY. Prices are constantly moving up and there is no interest in moving them in the opposite direction.

DOUBLE-DISTRIBUTION DAY
Oct. '99 crude oil (CEC-NYM), 8/31/99

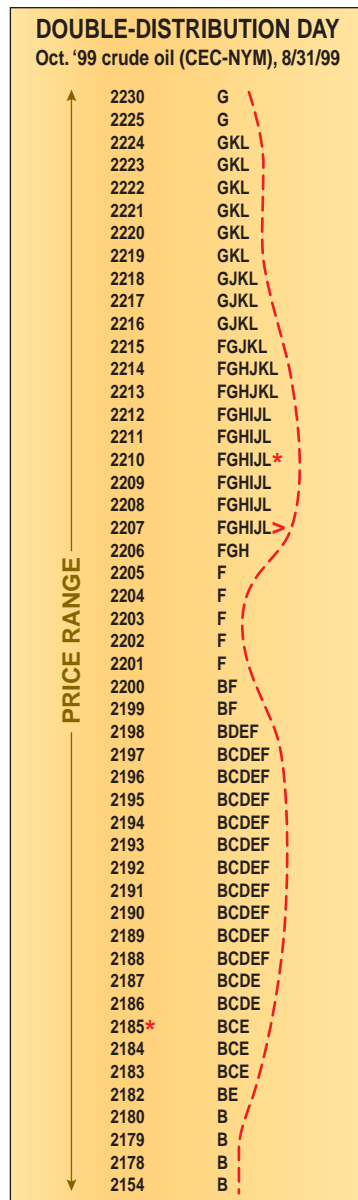| PRICE RANGE		
	2230	G
	2225	G
	2224	GKL
	2223	GKL
	2222	GKL
	2221	GKL
	2220	GKL
	2219	GKL
	2218	GJKL
	2217	GJKL
	2216	GJKL
	2215	FGJKL
	2214	FGHJKL
	2213	FGHJKL
	2212	FGHIJL
	2211	FGHIJL
	2210	FGHIJL*
	2209	FGHIJL
	2208	FGHIJL
	2207	FGHIJL>
	2206	FGH
	2205	F
	2204	F
	2203	F
	2202	F
	2201	F
	2200	BF
	2199	BF
	2198	BDEF
	2197	BCDEF
	2196	BCDEF
	2195	BCDEF
	2194	BCDEF
	2193	BCDEF
	2192	BCDEF
	2191	BCDEF
	2190	BCDEF
	2189	BCDEF
	2188	BCDEF
	2187	BCDE
	2186	BCDE
	2185*	BCE
	2184	BCE
	2183	BCE
	2182	BE
	2180	B
	2179	B
	2178	B
	2154	B

FIGURE 6: DOUBLE-DISTRIBUTION DAY. Here, two distributions are identified, indicating that the other-timeframe trader found prices to be at an unfair value and aggressively moved prices higher to another value area.

days. To do so, however, will require practice. Once you do, you can get a feel for the market.

It is equally important to determine whether the buyer or seller is in control in the early trading hours. Some off-floor traders prefer to wait till the third time period before making any trades, because during this period, you may see the development of a value area and extension of prices beyond the initial balance, both providing clues as to what type of day is developing. If the development is not clear at this point, it is a good idea to stand on the sidelines and wait.

The *normal day* is characterized by a wide initial balance, which indicates that the other-timeframe trader entered the market early. This is usually due to the release of major news that suggests either bullish or bearish signals. During the remainder of the trading day, the other-timeframe buyers and sellers trade back and forth and the market remains relatively balanced. Figure 3 shows an example of a normal day. As mentioned previously, it is rare to find a normal distribution in Market Profile, and hence a "normal" day is not particularly normal.

A more common occurrence is the "normal" variation of a normal day, which is also identified by activity during the early hours of trading. What makes this different from a normal day is that the other-timeframe trader enters the market after standing on the sidelines for a while. Note in Figure 4 how, during the fourth time period (represented by G), the range is extended beyond the initial balance. This indicates that the other-timeframe has found an opportune price level and entered the market aggressively. During the remainder of the day, trading activity occurs between the other-timeframe and day-timeframe traders. A new balance area will usually be formed.

Another type is the *trend day.* There are two types: standard and double-distribution trend days. Trend days are especially
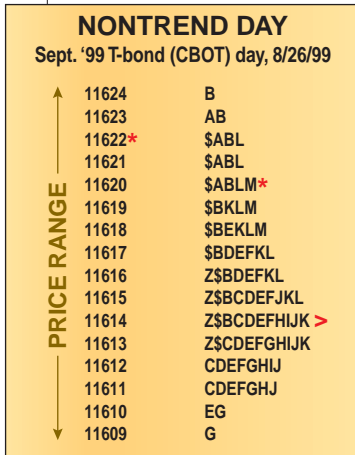
NONTREND DAY
Sept. '99 T-bond (CBOT) day, 8/26/99

PRICE RANGE		
↑	11624	B
	11623	AB
	11622*	$ABL
	11621	$ABL
	11620	$ABLM*
	11619	$BKLM
	11618	$BEKLM
	11617	$BDEFKL
	11616	Z$BDEFKL
	11615	Z$BCDEFJKL
	11614	Z$BCDEFHIJK >
	11613	Z$CDEFGHIJK
	11612	CDEFGHIJ
	11611	CDEFGHJ
	11610	EG
↓	11609	G

FIGURE 7: NONTREND DAY. A narrow trading range with a wide profile identifies this profile. It is likely that traders are waiting for a news event or economic release, or it may be a day prior to a holiday. Here, the TPO symbols are Z$ABCDEFGHIJKLM.

useful in indicating price direction. Figure 5 gives an example of a standard trend day; price is consistently rising and there is no interest in moving it in the opposite direction. The profile is usually narrow, with no time period containing more than five Tpos. The other-timeframe participant is in control.

A double-distribution day is displayed in Figure 6. You can clearly see the two different distributions that occurred during the trading day. The initial balance is represented by the B and C Tpos and is relatively narrow, which means that the other-timeframe participant has not entered the market. The other-timeframe buyers enter the market aggressively during F because they believe prices are below value. This results in the prices extending to another level. Trading between buyers and sellers occurs at this stage, and a new balance level is established.

If you detect the formation of the double-distribution day early, you can take advantage of some great trading opportunities. It is important to watch the Tpos here between the two distributions. They are usually single prints, but if you notice them changing to double prints later during the trading day, it is an indication that price levels are not being sustained at the second distribution; they are, in fact, moving back to the first distribution.

There are days when there will be no enthusiasm that you can observe in the market. You will be able to identify this by a very narrow trading range with a wide profile (Figure 7); no evidence of a range exten-sion is apparent. This is known as a *nontrend day*. What may be happening here is that traders are waiting for either a news event or an economic release, or it could just be a day prior to a holiday. Usually, a nontrend day is followed by a change in trend. In Figure 8, you can see that the profile of the September 1999 Treasury bond contracts, which traded on August 26, 1999, was followed by a downward trend.

There is another type of day known as the *neutral day*. In this case, as the name suggests, there is not much difference in the perception of value between buyers and sellers. You can see that both buyers and sellers are active by the range extensions on either side of the initial balance. Figure 9 represents such a day. The close is in the middle of the range, indicating that there is a balance between the buyer and seller. If, however, the close was near either extreme, it may mean that the buyer (if it closed toward the top) or seller (if it closed toward the bottom) is in control.

FIGURE 8: IMPLICATIONS OF A NONTREND DAY. A nontrend day is usually followed by a change in trend. From the bar chart, you can see that the nontrend day that occurred on August 26 was followed by a downtrend. Figure 7 also displays the profile for September 1999 Treasury bond contracts traded on August 26. Since they are from different sources, however, the TPO letters and price increments do not coincide.

USE IT

After you gain some experience in analyzing Market Profile, you should be able to recognize the different types of days and predict the direction of the price. After you understand how to recognize the different days, you will need to put it all in perspective to see what Market Profile reveals and how traders can benefit from it.

Market Profile is different from a tick chart. It combines price, volume, and time and organizes those factors into a form that you will be able to recognize. A tick chart gives you an idea of the relationship between price and volume at a specific time. By observing Market Profile, you will be able to visually determine the price levels at which the markets are in equilibrium. You will also understand who is in control at any given time and recognize when that control shifts. This gives you an edge in making good trading decisions, alerting you to the possibility of a shift in the perception of value.

The auctioning process in the markets is similar to that of any business: supply and demand. In the futures pits, when
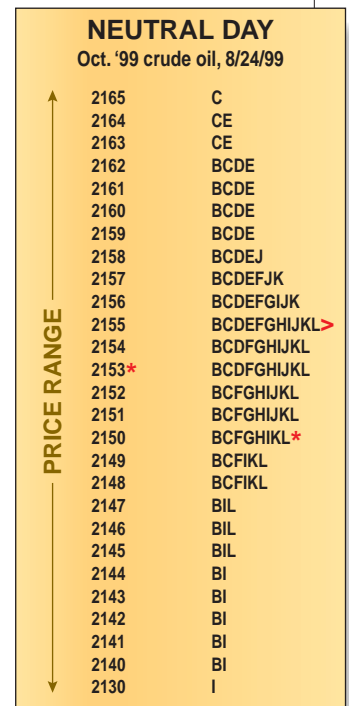
NEUTRAL DAY
Oct. '99 crude oil, 8/24/99

PRICE RANGE		
↑	2165	C
	2164	CE
	2163	CE
	2162	BCDE
	2161	BCDE
	2160	BCDE
	2159	BCDE
	2158	BCDEJ
	2157	BCDEFJK
	2156	BCDEFGIJK
	2155	BCDEFGHIJKL >
	2154	BCDFGHIJKL
	2153*	BCDFGHIJKL
	2152	BCFGHIJKL
	2151	BCFGHIJKL
	2150	BCFGHIKL*
	2149	BCFIKL
	2148	BCFIKL
	2147	BIL
	2146	BIL
	2145	BIL
	2144	BI
	2143	BI
	2142	BI
	2141	BI
	2140	BI
↓	2130	I

FIGURE 9: NEUTRAL DAY. Here, both buyers and sellers are active and they are in agreement on the value of the contracts. Since the close is in the middle of the profile, it indicates that there is balance between the buyers and sellers.

other-timeframe buyers and sellers conduct a transaction, the process goes through a middleman or the day-timeframe trader. If there is an imbalance between supply and demand, it is the floor trader who must bear the brunt. For example, if there are more other-timeframe sellers than buyers, the floor trader will be faced with a situation where there is an increased supply but not enough demand to dispose of the contracts. In order to restore the equilibrium between the buyers and sellers, prices will have to be reduced to the point where they will attract buying activity.

BUYING AND SELLING

Traders react differently to prices at different times, so it is important to recognize the type of activity that is taking place. There are two broad categories of buying and selling activities known as *initiative* and *responsive*. Differentiating between the two is important, and the structure of Market Profile will provide clues to the type of activity taking place.

To determine which activity is taking place, you must compare the current day's profile to that of the previous day (Figure 10). If traders take the initiative to move prices higher or lower than the previous day's value area, the action indicates that the activity is initiative. If, on the other hand, selling activity is dominant when prices are higher than the previous day's value area, or buying activity prominent when prices are lower, you can conclude that responsive activity is taking place.

Comparing the current day's profile to those of previous days enables the market participant to recognize the changes from one day to the next and observe changes in market participation and attempted divergence of price from value. Such an approach will provide clues about whether the market action is occurring in a trending or bracketing (trading range) market and reveal whether movement is likely to be met with acceptance or rejection.

You can spot a trend by looking at the movement of the value area. If it moves in one clear direction, either up or down, you know that the market is in a trend. A bracketed market is one in which prices move back and forth between two price levels that act as support and resistance.

When the value area steadily moves in one direction, this means that the movement in price is being accepted. If, however, the value area is overlapping the previous value area, you can conclude that the trend is slowing down and starting to find balance. In a bracketed market, both the other-
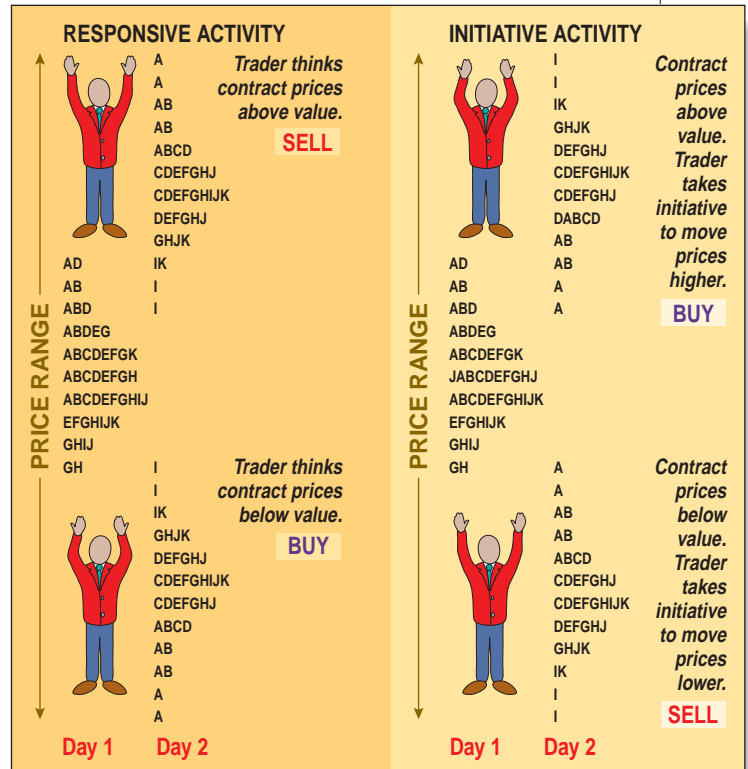

FIGURE 10: RESPONSIVE VS. INITIATIVE ACTIVITY. Increased selling activity when prices are above the previous day's value area, or buying activity when prices are below indicates that responsive activity is prevalent. Conversely, if increased buying activity is dominant when prices are above the previous day's value area, or selling activity prominent when prices are below, it indicates that initiative activity is prevalent.
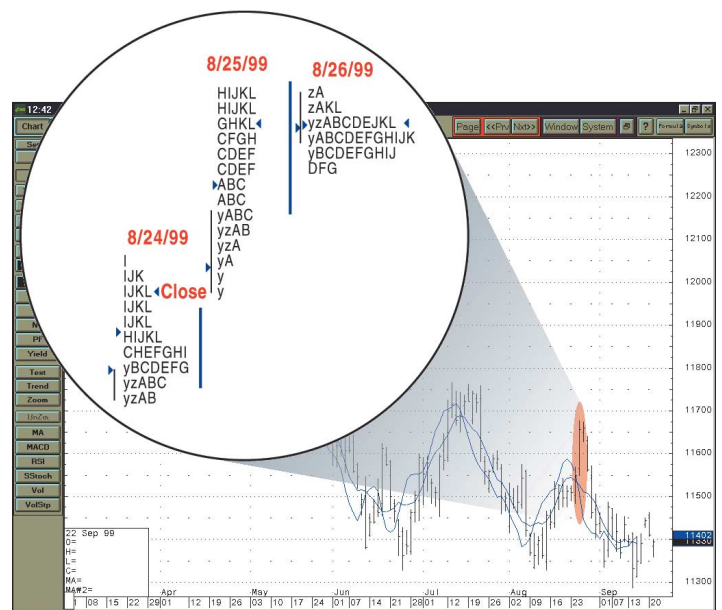

FIGURE 11: MARKET PROFILE WITH MOVING AVERAGES. Using Market Profile in conjunction with traditional indicators such as moving averages can supply additional confirmation. Here, moving averages alert a sell signal earlier than Market Profile, providing clues of a change in price direction.

timeframe buyers and sellers are responsive. When prices reach the top of a bracket, the seller enters and pushes them down. Conversely, when price reaches the bottom of the bracket, the buyer responds by driving them up.

To determine whether a market is bracketing or trending, I find it useful to combine Market Profile with moving averages. Figure 11 shows a bar chart of the September 1999 Treasury bond contracts with an overlay of the five- and 10-day moving averages and Market Profile of August 24 to 26, 1999.

> **Market Profile reveals several factors that provide you with an idea of the trading activity taking place in the markets.**

The moving average crossover methodology does a good job of indicating the trend direction and revealing good trading points. Combining it with Market Profile reveals some interesting points. The crossover of the moving averages that took place on August 24 in September T-bonds indicated a sell signal. However, with Market Profile, we can observe that the sell signal came too early; the profile does not indicate that the sellers are in control. In fact, it shows the opposite.

Since the close was above the value area, the profile of August 24 suggests that prices were likely to rise, which is precisely what happened. It is necessary to determine whether the prices will continue moving up. The profile of August 25 has a higher value area and a wider range than that of the previous day. It also shows no signs of decreased initiative activity. These factors indicate that the prices will probably keep going up.

On the profile of the following day (August 26), you can see the following:

1 Prices did not have much of a range and seemed to be that of a nontrend day. As mentioned previously, a nontrend day is usually followed by a change in trend.
2 Prices did not go above the high of the previous day.
3 The value area developed within that of the previous day.
4 Moving averages indicate an even sharper downturn.

The bar chart on Figure 11 shows that prices decreased sharply after August 26, 1999, suggesting that they hit a resistance level.

CONCLUSION

Market Profile reveals several factors that provide you with an idea of the trading activity taking place in the markets. Monitoring the market action will enable you to determine the type of day that is developing, whether a price trend has started, what the value area is, the type of activity (initiative or responsive) taking place, whether the activity is continuing or changing from the previous day, and whether the market is trending or bracketing. Combining Market Profile with indicators such as moving averages can help you create a successful trading strategy. Next time, I'll show you more ways to apply it.

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